



Interoffice Memo  
Office of Design Policy & Support

**DATE:** 3/21/2022

**FILE:** P.I.#s 0007685 & 0013763 CSNHS-0007-00 (685)  
Oconee County / GDOT District 1 - Gainesville  
SR 8/SR 316/US 29 @ CR 58/DIALS MILL EXT – PI 0007685  
SR 8/SR 316/US 29 @ CR 60/DIALS MILL ROAD — PI 0013763  
Grade Separation

**FROM:** *Dane Peters*  
for R. Christopher Rudd, PE, State Design Policy Engineer

**TO:** SEE DISTRIBUTION

**SUBJECT: APPROVED CONCEPT REPORT**

Attached is the approved Concept Report for the above subject project.

Attachment

Distribution:

Hiral Patel, Director of Engineering  
Joe Carpenter, Director of P3  
Albert Shelby, Director of Program Delivery  
Clement Solomon, Director, Division of Intermodal  
Darryl VanMeter, Assistant Director of P3/State Innovative Delivery Administrator  
Matthew Markham, Deputy Director of Planning  
Kim Nesbitt, Program Delivery Administrator  
Bobby Hilliard, Program Control Administrator  
Eric Duff, State Environmental Administrator  
Donn Digamon, State Bridge Engineer  
Alan Davis, State Traffic Engineer  
Angela Robinson, Financial Management Administrator  
Erik Rohde, State Project Review Engineer  
Patrick Allen, State Materials Engineer  
Nick Fields, State Utilities Administrator  
Eric Conklin, State Transportation Data Administrator  
Attn: Systems & Classification Branch  
Benny Walden, Statewide Location Bureau Chief  
Andy Casey, State Roadway Design Engineer  
Attn: Marvin Gavins, Design Group Manager or District Design Engineer  
Kelvin Mullins, District Engineer  
SueAnne Decker, District Preconstruction Engineer  
Yulonda Pride-Foster, District Utilities Manager  
Jonathan Digioia, Project Manager  
BOARD MEMBER - 10th Congressional District

## Project Concept Report

Project Type:	INTERCHANGE	P.I. Number:	0007685 & 0013763
GDOT District:	1	County:	OCONEE
Federal Route Number:	US 29	State Route Number:	SR 316
Project Number:	CSNHS-0007-00(685)		

These projects would construct an interchange to replace the existing at-grade intersections of Dials Mill Road and Dials Mill Extension. The report proposes combining PI 0007685 and PI 0013763 under PI 0013763 then removing PI 0007685 to perform the proposed work under PI 0013763.

**\*\* Report updated 9-2-2021 and 3-2-2022 to address review comments.**

**Submitted for approval:**

<i>C. Andy Carney, P.E.</i>	6-21-21
State Roadway Design Engineer <i>Hamberly W. Y. J. J. J.</i>	Date 7/6/2021
State Program Delivery Administrator <i>cf</i> <i>KESD</i>	Date
GDOT Project Manager <i>Jonathan D. D.</i>	6/24/2021
	Date

**Recommendation for approval:**

**\* Recommendations on file - KLP**

* Eric Duff	7-7-2021
State Environmental Administrator	Date
* Chris Raymond	7-26-2021
<i>For</i> State Traffic Engineer	Date
* Joshua Taylor	9-10-2021
<i>For</i> Project Review Engineer	Date
* Marcela Coll	7-28-2021
<i>For</i> State Utilities Engineer	Date
* SueAnne Decker	7-27-2021
<i>For</i> District Engineer	Date
* Donn Digamon	7-23-2021
State Bridge Engineer	Date
* Albert Shelby, Director of Program Delivery, recommended for approval on 7-7-2021	
* Alan Hood, State Airport Safety Data Program Manager, recommended for approval on 7-7-2021	

- ☒ MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).
- ☐ Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

* Matt Markham, Deputy Director of Planning	7-20-2021
State Transportation Planning Administrator	Date

## PROJECT LOCATION MAP



SR 8/ SR 316/ US 29 @ CR 60/Dials Mill Road

SR 8/ SR 316/ US 29 @ CR 58/Dials Mill Ext.

## PLANNING AND BACKGROUND

**Prepared By:** GDOT Office of Planning      **Date:** 2/22/2018

**Project Justification Statement: 0007685 Project Justification Statement:**

SR 316 is a primary east-west corridor in Northeast Georgia, connecting greater Atlanta and the Athens Metropolitan Area. In the section between I-85 in Gwinnett County and SR 10 Loop in Oconee County, access to SR 316 is currently provided by 9 grade-separated interchanges and 33 at-grade intersections. CR 58/Dials Mill Rd Extension is a local roadway serving primarily residential and agricultural properties. SR 316 is a designated freight corridor. Neither SR 316 nor CR58/Dials Mill Rd Extension are part of the GRIP network or the state bicycle route system.

Dials Mill Road extension currently intersects SR 316 approximately 0.25 miles west of the intersection of Dials Mill Road, and is currently configured as an at-grade intersection with two-way stop control.

The 2016 SR 316 Corridor Study for Oconee County confirmed a need to replace this intersection with a grade-separated overpass to improve connectivity between the Atlanta and Athens metropolitan areas. The SR 316 Corridor has experienced substantial growth in traffic volumes over the last several decades and is in need of improvements to assist in congestion relief and crash reduction.

SR 316 has a total of 4 travel lanes at Dials Mill Rd extension and is classified as an urban [rural] principal arterial. Dials Mill Road extension has a total of 2 travel lanes at SR 316 and is a local roadway.

AADT for 2016 varies along the SR 316 corridor within Oconee County, from 24,600 (12% trucks) West of SR 10/US 78, to 32,900 (6.5% trucks) between SR 10/ US 78 and SR 10 Loop/Athens Bypass. These figures are projected to increase to 31,000 and 41,000, respectively, by 2040. The 2016 GDOT SR 316 Corridor Study estimated LOS A on SR 316 at this location, based on the 2014 data. Crash data from 2015 indicates that the SR 316 corridor within Oconee County is above statewide averages for fatal injuries, but below statewide averages for non-fatal injuries and for total crashes. The corridor was below statewide averages for urban [rural] principal arterial roadways for total crashes, crash-related injuries, and fatal injuries in 2016 and 2014. [traffic for 2020 is 30,750]

The proposed improvements at this location are needed to improve connectivity, accommodate expected growth in traffic volumes, and enhance operational traffic conditions in the proposed project area.

**0013763 Project Justification Statement:**

PI #0013763 was first programmed in 2016 after a review conducted by the Office of Planning. The Office of Planning review recommended the split of PI # 0007685, which encompasses the grade separation of nine existing intersections along the SR 316 corridor in Oconee County under one PI number. PI # 0007685 was split into nine separate projects due to the difficulties with phasing and funding of each of these projects under one PI number. These projects were programmed into the Department's Construction Work Program as six grade separation projects, two new interchange projects, and the reconstruction of the existing SR 316 @ SR 10/Athens Perimeter interchange. SR 316 is a part of the State Freight Network. The project for Dials Mill Road proposes a re-routing of the road along the northern edge of the SR 316 right-of-way to connect with Dials Mill Extension to the west.

The current (2018) Annual Average Daily Traffic (AADT) count nearest the SR 316/Dials Mill Road intersection is 38,600 VPD with a truck percentage of 8%. Future (2040) traffic volumes are projected (assuming an annual growth rate of 1%) to be 48,0466 VPD. Both current and future level of service (LOS) along this segment of SR 316 is projected to be at B. [traffic for 2020 is 35,975]

For each year in the three-year period from 2016-2018 (the latest data available), crash rates for the project area location of SR 316 at Dials Mill Road are above the statewide average for similar functional classification of the road (Principal Arterial Route).



The proposed project is needed in order to improve connectivity between the Atlanta and Athens metropolitan area, as well as safety improvements as part of the overall effort by the Department to grade-separate the SR 316 corridor from Lawrenceville to Athens.

This project proposes combining PI 0007685 and PI 0013763 under PI 0013763 then removing 0007685.

**Existing conditions:**

**SR 316:** Four lane divided Portland Cement highway with 12-foot lanes, 6.5-foot paved shoulders, and 44-foot depressed median. At grade intersections with Dials Mill Rd. and Dials Mill Ext.

**Dials Mill Rd.:** Two lane undivided Bituminous Concrete road with 12-foot lanes, 2-foot paved shoulders. At-grade intersection with Dials Mill Ext., Dials Mill Plantation, and SR 316.

**Dials Mill Ext.:** Two lane undivided Bituminous Concrete road with 12-foot lanes, 2-foot paved shoulders. At-grade intersections with Dials Mill Rd., Dials Mill Spur and SR 316.

**Other projects in the area:**

- PI 0013764-Interchange project, PE Authorized: MGMT Let date 6/2027. Replace at-grade intersection of SR 316 and CR 64 with grade separated interchange. 1.3 miles East of Dials Mill Rd. No coordination necessary.
- PI 0013765- Interchange project, PE date of 2023. Replace at-grade intersection of SR 316 and CR 263 with grade separated interchange. 2.0 miles East of Dials Mill Rd. No coordination necessary.
- Atlanta Gas Light (AGL) gas line renewal project, coordination will be necessary. Right-of-way overlaps between the projects. This project has not begun construction.
- PI 0008430- Interchange project. Replace at-grade intersection of SR 316 and SR 11 with grade separated interchange. 9.2 miles West of Dials Mill Rd. Currently under construction, no coordination necessary.
- PI 0008431- Interchange project. Replace at-grade intersection of SR 316 and SR 53 with grade separated interchange. 5.7 miles West of Dials Mill Rd. Currently under construction, no coordination necessary.
- PI 0013910- Interchange project, Design-Build: MGMT Let Date 5/2023. Replace at-grade intersection with grade separated interchange at the intersection of SR 316 and CR 329/Barber Creek Road. 1.7 miles West of Dials Mill Rd. Some coordination may be necessary.

**MPO:** Athens **TIP #:** N/A

**Congressional District(s):** 10

**Federal Oversight:** ☐ PoDI ☐ Exempt ☒ State Funded ☐ Other

**Projected Traffic SR 316:** 24 HR T: 19 % Current Year (2020): 30,750  
Open Year (2027): 35,975 Design Year (2047): 49,275

**Projected Traffic Dials Mill Rd.:** 24 HR T: 7 % Current Year (2020): 1,650  
Open Year (2027): 1,750 Design Year (2047): 2,400

**Projected Traffic Dials Mill Ext.:** 24 HR T: 7 % Current Year (2020): 825  
Open Year (2027): 975 Design Year (2047): 1,350

Traffic Projections Performed by: Office of Planning

Date approved by the GDOT Office of Planning: 11/2/2020

**AASHTO Functional Classification (Mainline):** Principal Arterial

**AASHTO Context Classification (Mainline):** Rural

**AASHTO Project Type (Mainline):** Reconstruction

**Is the project located on a NHS roadway?** ☐ No ☒ Yes

**Complete Streets - Bicycle, Pedestrian, and/or Transit Standard Warrants:**

Warrants met: ☒ None ☐ Bicycle ☐ Pedestrian ☐ Transit

**Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project?** ☒ No ☐ Yes

**Pavement Evaluation and Recommendations**

Initial Pavement Evaluation Summary Report Required? ☒ No ☐ Yes

Feasible Pavement Alternatives: ☐ HMA ☐ PCC ☒ HMA & PCC

**Is the project located on a Special Roadway or Network?** ☐ No ☒ Yes *Oversize Truck Route  
Statewide Freight Corridor*

**Do the limits of the project include one or more signalized intersections?** ☒ No ☐ Yes

**Is Federal Aviation Administration coordination anticipated?** ☒ No ☐ Yes

- Any construction equipment in excess of 200 feet above the roadway elevation must be evaluated by the FAA. Evaluation by filing of "Notice of proposed construction" FAA form 7460-1 must be accomplished not earlier than 18 months and not later than 120 days prior to construction. E-File at:  
<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>

## DESIGN AND STRUCTURAL

**Description of the proposed project:** The proposed length of this project is approximately 0.7 miles along SR 316 and 0.6 miles along Dials Mill Road. A bridge is proposed to accommodate an interchange at Dials Mill Rd. and SR 316. The intersection of Dials Mill Ext. at SR 316 is proposed to be closed. Dials Mill Ext. will be realigned to connect to Dials Mill Spur south of SR 316, and a cul-de-sac will be added along Dials Mill Ext. north of SR 316. The intersection of Dials Mill Rd and Dials Mill Ext. is also proposed to be realigned to meet current design standards. This project is approximately one and a half miles southeast of the Statham city limits and approximately one-half mile east of the Oconee/Barrow county line.

**Major Structures:**

Structure	Existing	Proposed
The intersection of SR 316 and Dials Mill Rd.	N/A	Rural Bridge, 291 feet long 42 feet wide, 2 twelve-foot lanes and 8-foot shoulders.

**Accelerated Bridge Construction (ABC) techniques anticipated:** ☒ No ☐ Yes

Accelerated Bridge Construction (ABC) techniques are not anticipated due to the minimal impact on SR 316.

This project proposes combining PI 0007685 and PI 0013763 under PI 0013763 then removing 0007685.

**Mainline Design Features:**

SR 316	<b>Functional Classification:</b> <i>Principal Arterial</i>		
<b>Feature</b>	<b>Existing</b>	<b>*Policy</b>	<b>Proposed</b>
<b>Typical Section:</b>			
- Number of Through Lanes	4		4
- Lane Width(s) (-ft)	12	12	12
- Median Width (-ft) & Type	44	32-44	44
- Shoulder Width (-ft) (Outside)	10	10	10
- Paved Shoulder width (-ft) (Outside)	Match Exist	Match Exist	Match Exist
- Cross Slope (%)	2%	2%	2%
- Outside Shoulder Slope (%)	6%	6%	6%
- Inside Shoulder Width (-ft)	6	6	6
- Paved Inside Shoulder Width (-ft)	2	2	2
- Sidewalks (-ft)	N/A	N/A	N/A
- Auxiliary Lanes (# LTL, RTL or TWLTL / -ft width)	2 RTL– 12'		2 RTL– 12'
- Bike Accommodations	N/A	N/A	N/A
Posted Speed (mph)	65		65
<b>Design Speed (mph)</b>	<b>65</b>	<b>65</b>	<b>65</b>
<b>Minimum Horizontal Curve Radius (-ft)</b>	<b>N/A</b>	<b>1660</b>	1660
<b>Maximum Superelevation Rate (%)</b>	<b>N/A</b>	<b>6%</b>	N/A
<b>Maximum Grade (%)</b>	<b>4%</b>	<b>4%</b>	<b>4%</b>
<b>Access Control</b>	<b>PARTIAL</b>	<b>FULL CONTROL</b>	<b>FULL CONTROL</b>
Design Vehicle	WB-67		WB-67
Check Vehicle	OSOW		OSOW
Pavement Type	CONC		CONC

**Side Road Design Features:**

Dials Mill Road	<b>Functional Classification:</b> <i>Local Road and Street</i>		
Feature	Existing	*Policy	Proposed
<b>Typical Section:</b>			
- Number of Through Lanes	2		2
- Lane Width(s) (-ft)	12	11-12	12
- Shoulder Width (-ft) (Outside)	8	6-8	8
- Paved Shoulder Width (-ft) (Outside)	2	2	2
- Cross Slope (%)	2%	2%	2%
- Outside Shoulder Slope (%)	6%	6%	6%
- Sidewalks (-ft)	N/A	N/A	N/A
- Bike Accommodations	N/A	N/A	N/A
Posted Speed (mph)	50		50
<b>Design Speed (mph)</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Minimum Horizontal Curve Radius (-ft)</b>	<b>700</b>	<b>758</b>	758
<b>Maximum Superelevation Rate (%)</b>	<b>8%</b>	<b>8%</b>	8%
<b>Maximum Grade (%)</b>	<b>4%</b>	<b>4%</b>	<b>4%</b>
<b>Access Control</b>	<b>Permitted</b>	<b>Permitted</b>	<b>Permitted</b>
Design Vehicle	S-BUS 36		S-BUS 36
Pavement Type	ASPH		ASPH

Dials Mill Plantation, Dials Mill Extension	<b>Functional Classification:</b> <i>Local Road and Street</i>		
Feature	Existing	*Policy	Proposed
<b>Typical Section:</b>			
- Number of Through Lanes	2		2
- Lane Width(s) (-ft)	12	11-12	12
- Shoulder Width (-ft) (Outside)	8	6-8	8
- Paved Shoulder Width (-ft) (Outside)	2	2	2
- Cross Slope (%)	2%	2%	2%
- Outside Shoulder Slope (%)	6%	6%	6%
- Sidewalks (-ft)	N/A	N/A	N/A
- Bike Accommodations	N/A	N/A	N/A
Posted Speed (mph)	45		45
<b>Design Speed (mph)</b>	<b>45</b>	<b>45</b>	<b>45</b>
<b>Minimum Horizontal Curve Radius (-ft)</b>	<b>700</b>	<b>587</b>	700
<b>Maximum Superelevation Rate (%)</b>	<b>8%</b>	<b>8%</b>	8%
<b>Maximum Grade (%)</b>	<b>4%</b>	<b>4%</b>	<b>4%</b>
<b>Access Control</b>	<b>Permitted</b>	<b>Permitted</b>	<b>Permitted</b>
Design Vehicle	S-BUS 36		S-BUS 36
Pavement Type	ASPH		ASPH



**Side Road Design Features:**

Ramps	<b>Functional Classification:</b> <i>Principal Arterial</i>		
<b>Feature</b>	<b>Existing</b>	<b>*Policy</b>	<b>Proposed</b>
<b>Typical Section:</b>			
- Number of Through Lanes	N/A		1
- Lane Width(s) (-ft)	N/A	16	16
- Shoulder Width (-ft) (Inside)	N/A	8	8
- Paved Shoulder Width (inside) (-ft)	N/A	4	4
- Shoulder Width (-ft) (Outside)	N/A	12	12
- Paved Shoulder Width (outside) (-ft)	N/A	10	10
- Cross Slope (%)	N/A	2%	2%
- Outside Shoulder Slope (%)	N/A	4%	4%
- Sidewalks (-ft)	N/A	N/A	N/A
- Bike Accommodations	N/A	N/A	N/A
Posted Speed (mph)	N/A		55
<b>Design Speed (mph)</b>	N/A	55	55
<b>Minimum Horizontal Curve Radius (-ft)</b>	N/A	960	960
<b>Maximum Superelevation Rate (%)</b>	N/A	6% OR 8%	8%
<b>Maximum Grade (%)</b>	N/A	3-5%	5%
<b>Access Control</b>	N/A	<b>FULL CONTROL</b>	<b>FULL CONTROL</b>
Design Vehicle	N/A		WB-67
Pavement Type	N/A		CONC

**Design Exceptions/Design Variances to FHWA or GDOT Controlling Criteria anticipated:**

<b>FHWA or GDOT Controlling Criteria</b>	<b>No</b>	<b>Undetermined</b>	<b>Yes</b>	<b>DE or DV</b>	<b>Approval Date (if applicable)</b>
1. Design Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. Design Loading Structural Capacity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. Stopping Sight Distance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4. Horizontal Curve Radius	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. Maximum Grade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6. Vertical Clearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7. Superelevation Rate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8. Lane Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
9. Cross Slope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10. Shoulder Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**Design Variances to GDOT Standard Criteria anticipated:**

<b>GDOT Standard Criteria</b>	<b>No</b>	<b>Undetermined</b>	<b>Yes</b>	<b>Approval Date (if applicable)</b>
1. Access Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Shoulder Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Intersection Sight Distance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Intersection Skew Angle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Tangent Lengths on Reverse Curves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Lateral Offset to Obstruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Rumble Strips	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Safety Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Median Usage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Roundabout Illumination Levels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Complete Streets Warrants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. ADA Requirements in PROWAG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. GDOT Construction Standards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. GDOT Drainage Manual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**VE Study anticipated:** ☒ No ☐ Yes ☐ Completed:

**Lighting Required:** ☒ No ☐ Yes

**Off-site Detours Anticipated:** ☐ No ☐ Undetermined ☒ Yes

If yes: Roadway type to be closed: ☒ Local Road ☐ State Route  
Detour Route selected: ☒ Local Road ☐ State Route  
District Concurrence w/Detour Route: ☒ No/Pending ☐ Received *Date*

**Transportation Management Plan [TMP] Required:** ☐ No ☒ Yes  
If Yes: Project classified as: ☒ Non-Significant ☐ Significant  
TMP Components Anticipated: ☒ TTC ☐ TO ☐ PI

## **INTERCHANGES AND INTERSECTIONS**

**Interchanges/Major Intersections:**

- SR 316 intersects Dials Mill Ext. at grade
- SR 316 intersects Dials Mill Rd. at grade
- Dials Mill Rd. intersects Dials Mill Plantation
- Dials Mill Ext. and Dials Mill Rd. intersect at grade
- Dials Mill Ext. intersects Dials Mill Spur

**Intersection Control Evaluation (ICE) Required:** ☐ No ☒ Yes

**Roundabout Concept Validation Required:** ☒ No ☐ Yes ☐ Completed

## UTILITY AND PROPERTY

**Railroad Involvement:** N/A

**Utility Involvements:**

- Walton EMC - Power
- Georgia Power Co – Power Distribution
- AT&T Telecom - Telecommunications
- Fiberlight Fiber - Internet
- Oconee County – Water
- Comcast – Cable
- Southern Company - Gas (AGL)
  - A utility permit will be needed for the gas main upgrade.

**SUE Required:** ☐ No ☒ Yes ☐ Undetermined

**Public Interest Determination Policy and Procedure recommended:** ☒ No ☐ Yes

**Right-of-Way (ROW):** Existing width: 335ft. Proposed width: 335ft.

Required Right-of-Way anticipated: ☐ None ☒ Yes ☐ Undetermined

Easements anticipated: ☐ None ☒ Temporary ☒ Permanent \* ☐ Utility ☒ Other

*\* Permanent easements include the right to place utilities.*

Anticipated total number of impacted parcels:		18
Displacements anticipated:	Businesses:	0
	Residences:	1
	Other:	0
Total Displacements:		1

**Location and Design approval:** ☐ Not Required ☒ Required

**Impacts to USACE property anticipated:** ☒ No ☐ Yes ☐ Undetermined

## ENVIRONMENTAL & PERMITS

**Anticipated Environmental Document:** *GEPA ~ None*

**Level of Environmental Analysis:**

- ☒ The environmental considerations noted below are based on preliminary desktop or screening level environmental analysis and are subject to revision after the completion of resource identification, delineation, and agency concurrence.
- ☐ The environmental considerations noted below are based on the completion of resource identification, delineation, and agency concurrence.

**GDOT MS4 Permit Compliance – Is the project located in a GDOT MS4 area?** ☐ No ☒ Yes

**If yes, is the GDOT MS4 Permit anticipated to apply to all or part of this project?** ☐ No ☒ Yes

**Is Non-MS4 water quality mitigation anticipated?** ☒ No ☐ Yes

**Environmental Permits/Variations/Commitments/Coordination anticipated:**

Permit/Variance/Commitment/ Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Forest Service/NPS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. CWA Section 404 Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. Tennessee Valley Authority Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. USACE Real Estate Outgrant	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6. Buffer Variance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Coastal Zone Management Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. NPDES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. FEMA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10. Cemetery Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Other Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. Other Commitments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13. Other Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Is a PAR required? ☒ No ☐ Yes ☐ Completed *Date*

**Environmental Comments and Information:**

**NEPA/GEPA:** NONE

**Ecology:** After desktop screening, at least one perennial stream (McNutt Creek) is located in the project area. No federal or state species were identified within the project vicinity, and no protected species habitat or seasonal surveys are required. There may be additional waters/wetlands in the forested area, which will be known after field work is conducted.

**History:** Based on desktop review there are approximately five parcels with properties 50 years of age and older within the project area. A full survey is being conducted to determine the NRHP eligibility of these resources. If any are eligible there is potential for adverse effects to historic resources. As the project is state funded SHPO concurrence is not required; however, if permitting is required through the USACE then Section 106 would need to be completed and SHPO concurrence would be required on eligibility and effect recommendations to historic resources.

**Archeology:** A Phase I archaeological survey will be required to identify archaeological sites located within the project area, including cemeteries. Any identified sites will need to be evaluated for their eligibility for the National Register of Historic Places.

**Air Quality:**

Is the project located in an Ozone Non-attainment area? ☒ No ☐ Yes

Is a Carbon Monoxide hotspot analysis required? ☒ No ☐ Yes

\*The entire State of Georgia is in attainment for Carbon Monoxide. No CO analysis is required. No MSAT assessment is required under the GEPA regulations.

**Noise Effects:** No noise assessment is required under the GEPA regulations.

**Public Involvement:** Public Detour Open House will be necessary due to the off site detour.

**Major stakeholders:** Residents of Dials Mill Plantation (subdivision).



## CONSTRUCTION

**Issues potentially affecting constructability/construction schedule:** Construction of the bridge over SR 316 may have some temporary affects on SR 316.

**Early Completion Incentives recommended for consideration:** ☒ No ☐ Yes

## COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

**Initial Concept Team Meeting:** August 24, 2020

**Concept Team Meeting:** May 20, 2021

**Other coordination to date:** Several Coordination meetings have been held to discuss public involvement plan for SR 316 projects.

Project Activity	Party Responsible for Performing Task(s)
Concept Development	GDOT ROADWAY DESIGN
Design	GDOT ROADWAY DESIGN
Right-of-Way Acquisition	GDOT DISTRICT 1 RIGHT OF WAY
Utility Coordination (Preconstruction)	GDOT DISTRICT 1 UTILITIES
Utility Relocation (Construction)	UTILITY OWNERS
Letting to Contract	GDOT CONSTRUCTION BIDDING ADMINISTRATION
Construction Supervision	GDOT CONSTRUCTION
Providing Material Pits	CONTRACTOR
Providing Detours	CONTRACTOR
Environmental Studies, Documents, & Permits	GDOT ENVIRONMENTAL
Environmental Mitigation	GDOT ENVIRONMENTAL SERVICES
Construction Inspection & Materials Testing	GDOT CONSTRUCTION

Project Cost Estimate Summary and Funding Responsibilities:						
	PE Activities		ROW	Reimbursable Utilities	CST*	Total Cost
	PE Funding	Section 404 Mitigation				
Date of Estimate:	2/25/2020	N/A	4/5/2021	1/26/2021	2/8/2022	
Funded By:	GDOT	N/A	GDOT	GDOT	GDOT	
0007685 Programmed Cost:	\$1,233,550	N/A	\$284,000	\$0	\$15,036,150	\$16,553,700
0013763 Programmed Cost:	\$2,741,650		\$2,707,000	\$0	\$33,420,750	\$38,869,400
Estimated Cost:	0007685: \$1,233,550 0013763: \$2,741,650	N/A	\$1,936,000	\$745,000	\$20,011,141	\$26,667,341
Total Cost Difference:						\$28,755,759

\*CST Cost includes: Construction, Engineering and Inspection, Contingencies and Liquid AC Cost Adjustment. This project proposes combining PI 0007685 and PI 0013763 under PI 0013763 then removing 0007685.

## ALTERNATIVES DISCUSSION

### Alternative selection:

**Preferred Alternative:** The preferred alternative proposes construction of an interchange along Dials Mill Rd. with two-way stop-controlled intersections for the ramps. This alternative also realigns the intersection of Dials Mill Rd. and Dials Mill Ext. to meet current design standards. The at-grade intersection along Dials Mill Ext. and SR 316 will be closed with a cul-de-sac constructed north of SR 316 and Dials Mill Ext. merging into Dials Mill Spur south of SR 316. This alternative also proposes combining the two PI#'s under 0013763 and removing 0007685.

would reduce crash frequency and/or severity and would provide a

<b>Estimated Property Impacts:</b>	18	<b>Estimated Total Cost:</b>	\$26,667,341
<b>Estimated ROW Cost:</b>	\$1,936,000	<b>Estimated CST Time:</b>	18

**Rationale:** This alternative was selected because it provided a safer, and more cost-efficient solution to improving connectivity and traffic flow along SR 316 as well as meeting driver expectations. Environmental impacts among all alternatives were similar and minimal. Utility impacts with this alternative were the lowest among the other considered alternatives. This alternative does reduce the connectivity along the side roads due to the closing of Dials Mill Ext. This alternative will require a minor off site detour during construction.

**No-Build Alternative:** This alternative maintains existing conditions.

<b>Estimated Property Impacts:</b>	0	<b>Estimated Total Cost:</b>	\$0
<b>Estimated ROW Cost:</b>	\$0	<b>Estimated CST Time:</b>	0

**Rationale:** This alternative was not selected because it does not answer the issues discussed in the justification statement. It does not improve connectivity and traffic flow along SR 316.

**Alternative 1:** This alternative proposed constructing an interchange at SR 316 over Dials Mill Ext. and a grade separation of SR 316 over Dials Mill Rd. This alternative would also realign the intersection of Dials Mill Rd. and Dials Mill Ext. to meet current design standards. This alternative would also propose relocating the intersection of Dials Mill Ext. and Dials Mill Spur further south along Dials Mill Ext.

<b>Estimated Property Impacts:</b>	16	<b>Estimated Total Cost:</b>	\$44,643,230
<b>Estimated ROW Cost:</b>	\$1,816,000	<b>Estimated CST Time:</b>	18

**Rationale:** This alternative would address the issues raised in the justification statement as well as preserve existing connectivity along the side roads. This alternative was not selected due to increased cost associated with the building of two bridges as well as the impacts to traffic during construction.

**Alternative 2:** This alternative proposed the construction of a new location roadway and interchange between the existing Dials Mill Rd. and Dials Mill Ext. intersections with dual roundabouts at the ramp intersections. A new at-grade T-intersection would be required along 3<sup>rd</sup> Ave. for the new location roadway. Dials Mill Ext. and Dials Mill Rd. would both be closed with a cul-de-sac on the north side of SR 316. South of SR 316, Dials Mill Ext would tie into Dials Mill Spur, and Dials Mill Rd. would tie into Dials Plantation Blvd. A new two-way stop controlled intersection would be used to tie in Dials Mill Ext. and Dials Mill Rd.

<b>Estimated Property Impacts:</b>	18	<b>Estimated Total Cost:</b>	\$29,743,432
<b>Estimated ROW Cost:</b>	\$2,032,000	<b>Estimated CST Time:</b>	18

**Rationale:** This alternative would address the issues raised in the justification statement concerning connectivity and traffic flow along SR 316 while having minimal impacts to traffic along SR 316 and side roads during construction. This alternative was not selected due to higher cost associated with the new construction and roundabouts, as well as safety impacts of adding multiple new intersections/conflict points along the side roads. This rationale applies to this alternative without the use of roundabouts as well.

**Alternative 3:** This alternative is the same as Alternative 2 except it does not intersect 3<sup>rd</sup> Ave. This alternative connects to the existing Dials Mill Rd. and Dials Mill Ext. North of SR 316 A new intersection North of SR 316 would be required with both Dials Mill Rd. and Dials Mill Ext. intersecting the new T-intersection. This new road north of SR 316 would tie into both Dials Mill Ext. and Dials Mill Rd. South of SR 316, Dials Mill Ext would tie into Dials Mill Spur, and Dials Mill Rd. would tie into Dials Plantation Blvd. A new two way stop controlled intersection would be used to tie in Dials Mill Ext. and Dials Mill Rd.

<b>Estimated Property Impacts:</b>	19	<b>Estimated Total Cost:</b>	\$30,793,768
<b>Estimated ROW Cost:</b>	\$2,013,000	<b>Estimated CST Time:</b>	18

**Rationale:** This alternative would address the issues raised in the justification statement concerning connectivity and traffic flow along SR 316 while having minimal impacts to traffic along SR 316 during construction. Some minor impacts to Dials Mill Ext. and Dials Mill Rd. north of SR 316 would be required during construction to tie in to the new construction. This alternative was not selected due to higher cost associated with the new construction and roundabouts, as well as safety impacts of adding multiple new intersections/conflict points along the side roads. This rationale applies to this alternative without the use of roundabouts as well.

Comments: This project proposes combining PI 0007685 and PI 0013763 under PI 0013763 then removing 0007685.

## **LIST OF ATTACHMENTS/SUPPORTING DATA**

1. Concept Layouts
2. Typical sections
3. Detailed Cost Estimates:
  - a. Revisions to Programmed Costs forms, & Liquid AC Cost Adjustment forms
  - b. Construction Estimate including Engineering and Inspection and Contingencies
  - c. Right-of-Way
  - d. Utilities
4. Concept Utility Report
5. Crash summaries and diagrams
6. Design Traffic diagrams
7. Capacity analysis summary
8. ICE Report(s)
  - a. Stage 1 Screening Decision Record
  - b. Stage 2 Alternative Selection Decision Record
9. MS4 Concept Report Summary
  - a. MS4 Concept Report Summary
  - b. MS4 Drainage Area Layout
10. Minutes of Concept meetings
  - a. Initial Concept Team Meeting
  - b. Concept Team Meeting



## APPROVALS

**Concur:** Hiral Patel 3/18/2022  
Director of Engineering Date

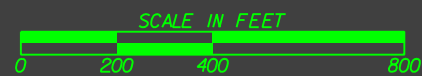
**Approve:** \_\_\_\_\_ 3/21/22  
Chief Engineer Date

# 1. Concept Layouts

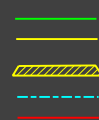




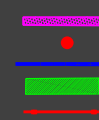
● DISPLACEMENT



PROPOSED EDGE OF PAVEMENT  
PROPOSED EDGE OF SHOULDER  
DRIVEWAY EASEMENT  
PROPERTY LINE  
PROPOSED RIGHT-OF-WAY



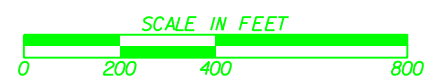
REMOVE MEDIAN CROSSING  
DISPLACEMENT  
DRAINAGE PIPE  
PERMANENT EASEMENT  
LIMITED ACCESS



PREFERRED ALTERNATIVE

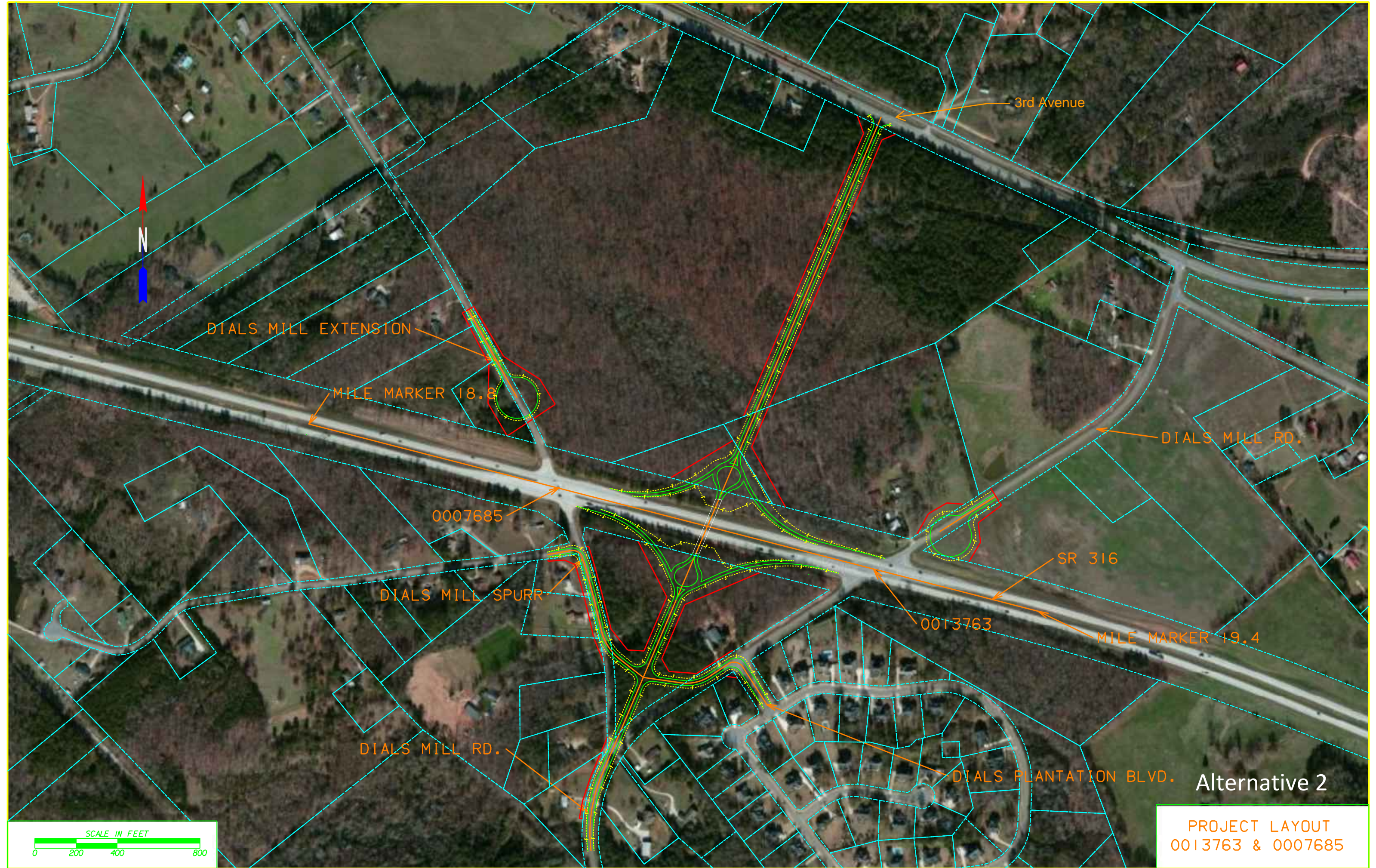
PROJECT LAYOUT  
OCONEE COUNTY  
0013763 & 0007685





PROJECT LAYOUT  
0013763 & 0007685  
Alternative 1

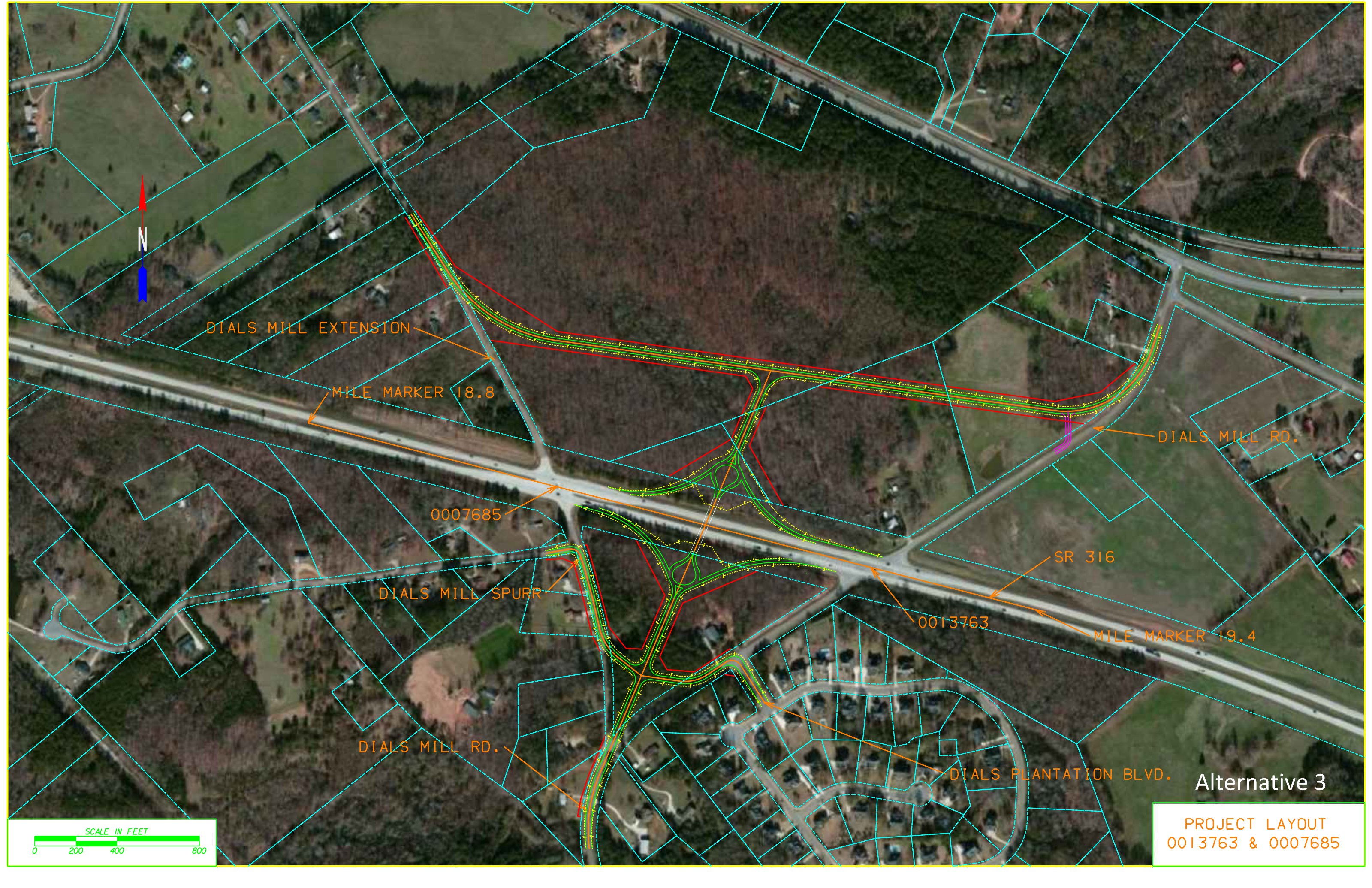




Alternative 2

PROJECT LAYOUT  
0013763 & 0007685



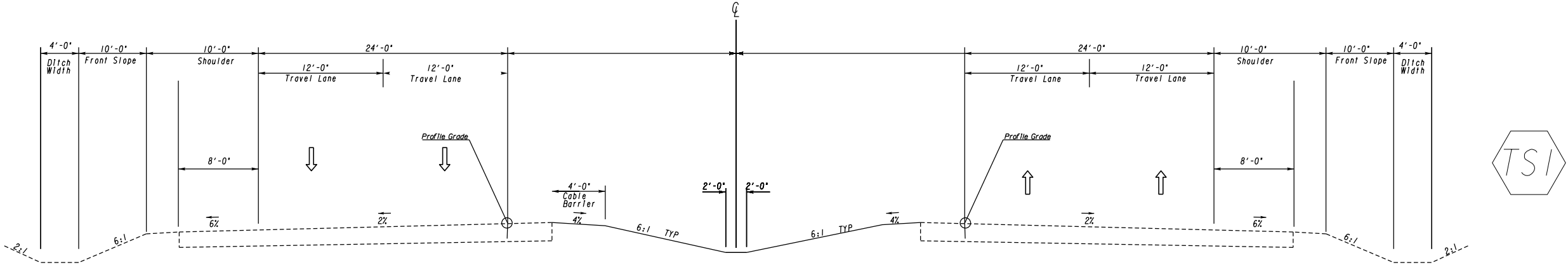


Alternative 3

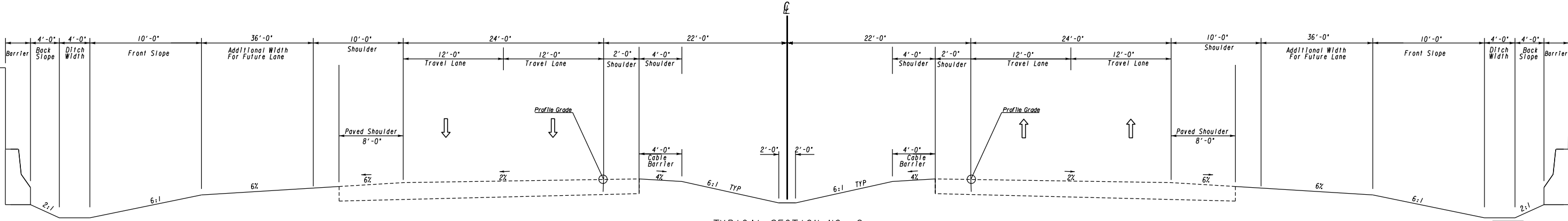
PROJECT LAYOUT  
0013763 & 0007685



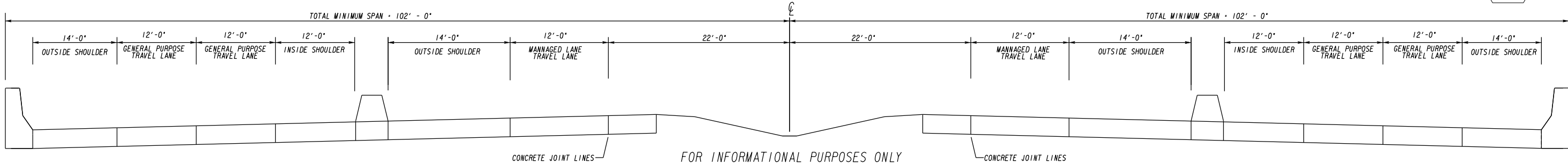
## 2. Typical Sections



TYPICAL SECTION NO. 1  
S.R. 316  
TANGENT SECTION



TYPICAL SECTION NO. 2  
S.R. 316 UNDER BRIDGE  
TANGENT SECTION



FOR INFORMATIONAL PURPOSES ONLY  
FUTURE PROPOSED MANAGED LANE



ROADWAY DESIGN

NOT TO SCALE

REVISION DATES

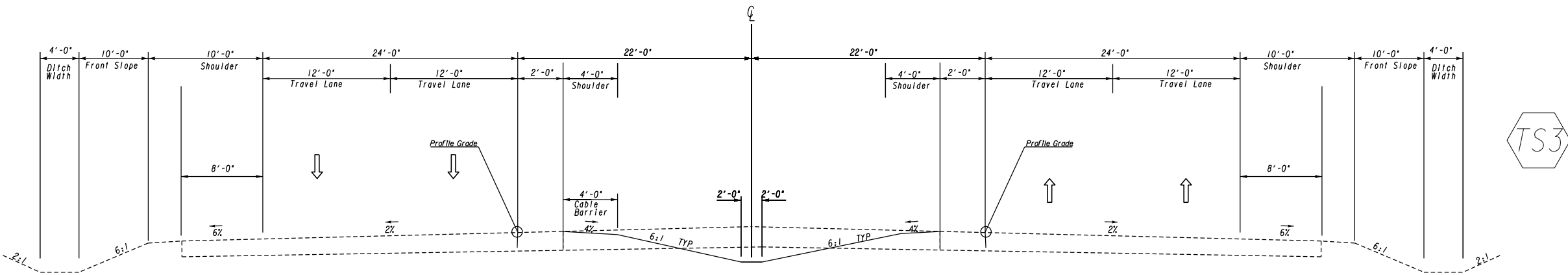

TYPICAL SECTIONS

0007685 & 0013763

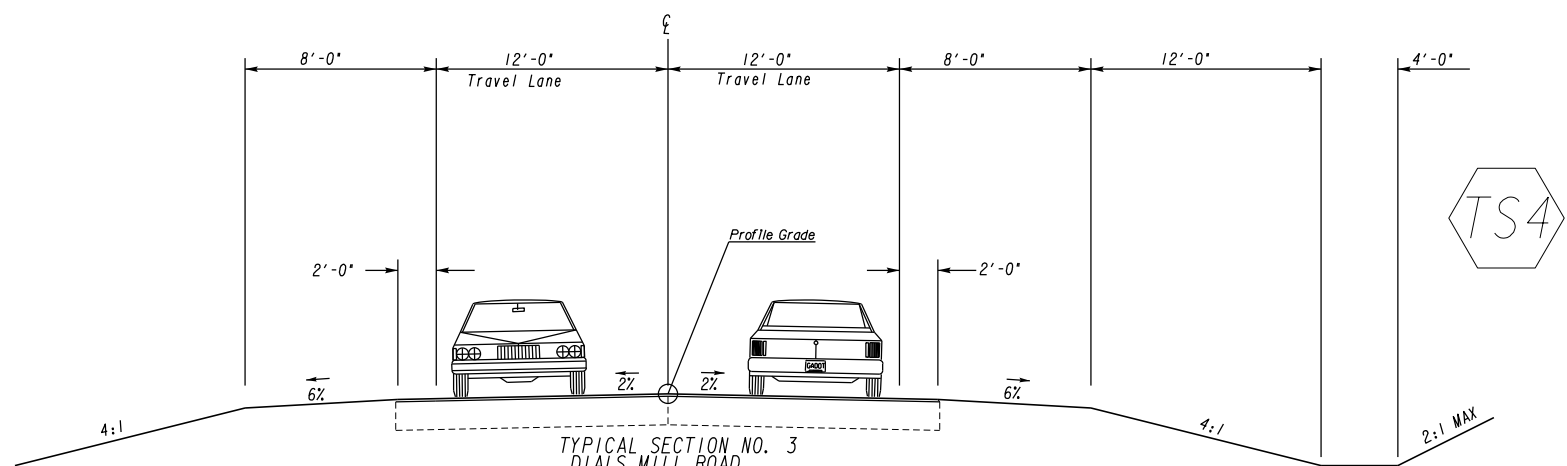
OCONEE COUNTY

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		

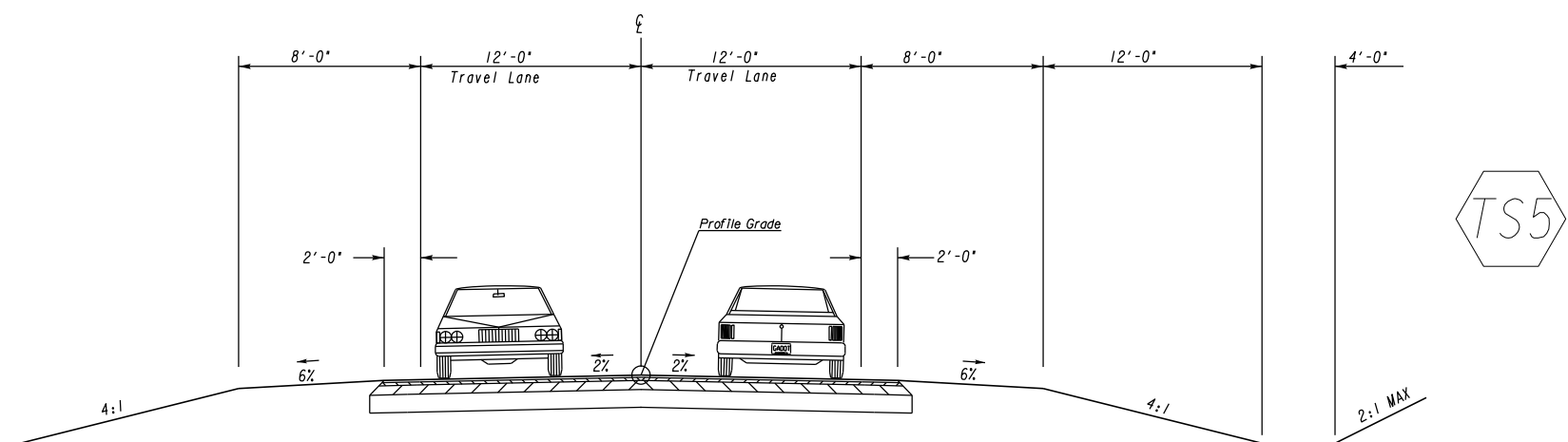
05-0001



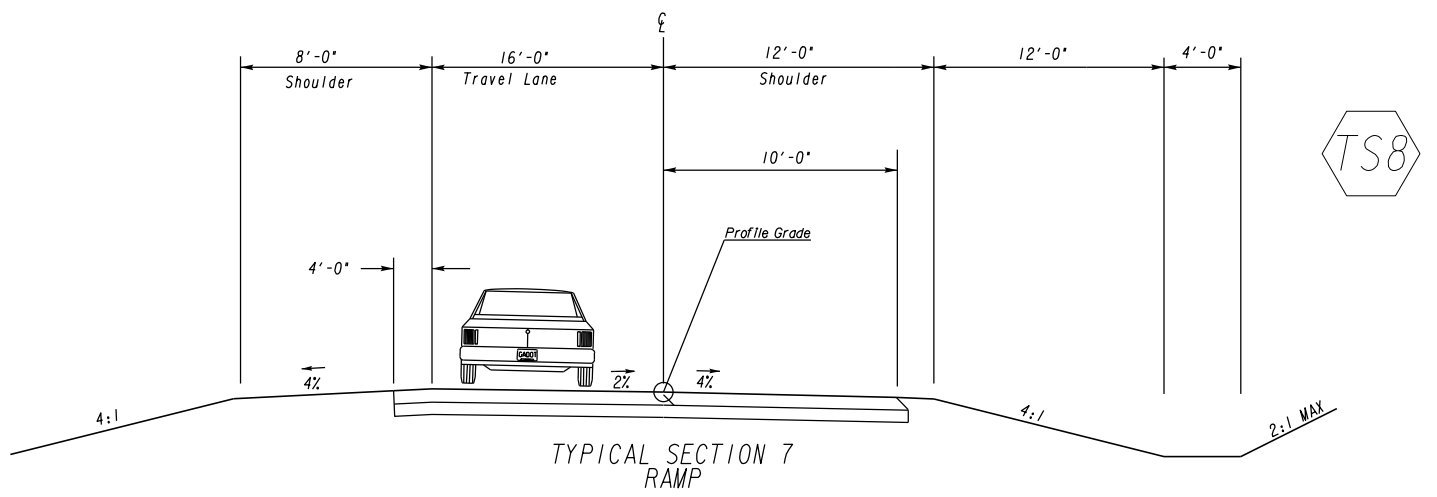
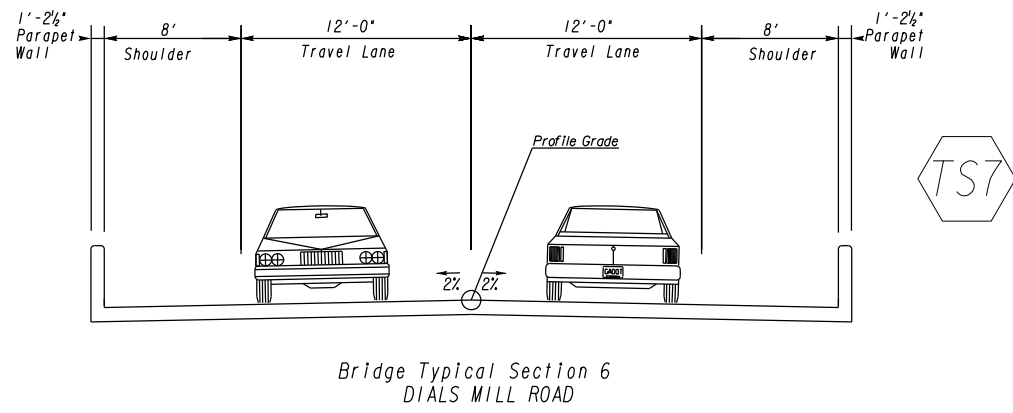
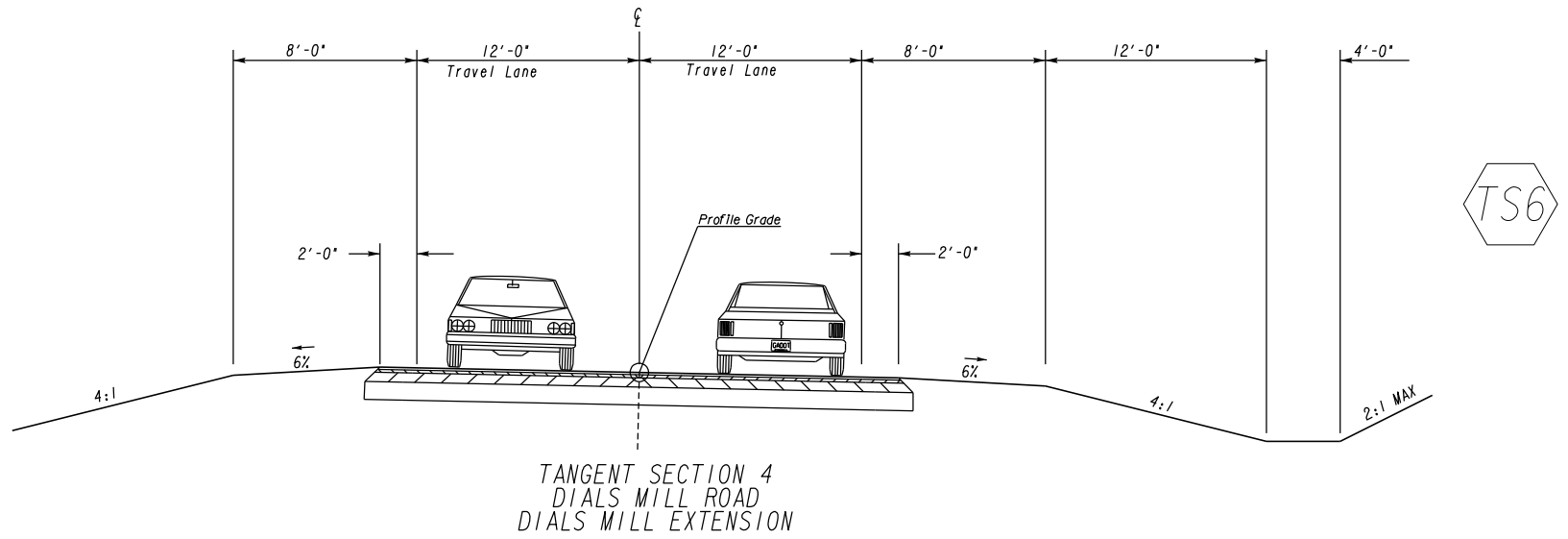
TYPICAL SECTION NO. 1  
S.R. 316  
CROSSOVER SECTION



TYPICAL SECTION NO. 3  
DIALS MILL ROAD  
DIALS MILL EXTENSION



TANGENT SECTION 4  
DIALS MILL ROAD  
DIALS MILL EXTENSION



NOT TO SCALE

REVISION DATES			TYPICAL SECTIONS			
			0007685 & 0013763			
			OCONEE COUNTY			
CHECKED:		DATE:		DRAWING No.		
BACKCHECKED:		DATE:		05-0003		
CORRECTED:		DATE:				
VERIFIED:		DATE:				

### 3. Detailed Cost Estimates

## Interoffice Memo

### FILE

PI NUMBER	0013763	PROJECT DESCRIPTION	USE 0013763 PRS DISCRIPTION
OFFICE	Program Delivery		
DATE	Wednesday February 9, 2022		

**From:** Kimberly W. Nesbitt, State Program Delivery Administrator

**To:** Erik Rohde, P.E., State Project Review Engineer  
via email Mailbox: [CostEstimatesandUpdates@dot.ga.gov](mailto:CostEstimatesandUpdates@dot.ga.gov)

**Subject:** REVISIONS TO PROGRAMMED COSTS

<b>Project Manager:</b>	Jonathan Digioia
<b>Management Let Date:</b>	6/15/2024
<b>Management Right of Way Date:</b>	3/15/2023

### Cost Estimate Review Iteration

Date of Submittal #1	
Date of Submittal #2	
Date of Submittal #3	

### Summary of Programmed Costs and Proposed Revised Costs:

Estimate Type	Cost Estimate Amounts (T-Pro Without Inflation)	Last Estimate Date	Revised Cost Estimate
CONSTRUCTION	\$33,420,750.00	06/15/2021	\$20,011,141.59
RIGHT OF WAY			
UTILITIES			

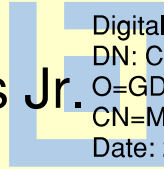
### Explanation for Cost Change and Contingency Justification:

### Attachments:



## Interoffice Memo

**Design Phase Leader Validation of Final QC/QA for Construction Cost Estimate Used In This Revision to Programmed Costs:**

Consultant Company or GDOT Design Office:	Roadway Design
Printed Name:	Marvin Gavins Jr.
Title:	Senior Design Group Manager
Signature:	 <p>Digitally signed by Marvin Gavins Jr. DN: C=US, E=mgavins@dot.ga.gov, O=GDOT, OU=Roadway Design, CN=Marvin Gavins Jr. Date: 2022.02.09 14:06:31-05'00'</p>
Date:	2/9/2022

FOR PROJECTS WITH A LOCAL SPONSOR	
If the project has a local sponsor, the project manager should ensure that the local authority completes the following validation indicating that it has reviewed the construction cost estimate and whether it is in concurrence with the construction costs presented.	
Please select the appropriate validation below upon review of the cost estimate:	
<input type="checkbox"/> I acknowledge that I have reviewed the project construction cost estimate and <u>concur</u> with the costs presented.	
<input type="checkbox"/> I acknowledge that I have reviewed the project construction cost estimate but <u>do not concur</u> with the costs presented.	
Please provide an explanation for non-concurrence.	
Local Authority Name and Title:	
Local Authority Signature:	
Date:	

[illegible]

## Project Cost Estimate

**Concept Name: 0007685 Cost Estimate Name: 0007685 & 0013763 B**

### Projects Cost Estimate

Processed on: Feb-09-2022 12:19 PM

**CONCEPT NAME:** 0007685    **COST ESTIMATE NAME:** 0007685 & 0013763 B  
**SPEC YEAR:** 21  
**ITEM HISTORY:** BHP-ALL - Statewide - 24 months  
**DESCRIPTION:** 0007685 & 0013763  
**ESTIMATE PHASE:** 2-DE - Designers Estimate

#### ITEMS FOR CONCEPT NAME 0007685

#### 0100 - Roadway

Line Number	Item	Quantity	Units	Price	Description	Amount
200	150-1000	1.00	LS	\$950,000.00	TRAFFIC CONTROL - 0007685	\$950,000.00
245	150-5010	6.00	EA	\$8,368.65	TRAFFIC CONTROL, PORTABLE IMPACT ATTENUATOR	\$50,211.88
250	153-1300	1.00	EA	\$86,915.92	FIELD ENGINEERS OFFICE TP 3	\$86,915.92
40	156-0100	1.00	LS	\$15,590.00	GPS DATA COLLECTION AND SUBMITTAL	\$15,590.00
195	201-1500	1.00	LS	\$4,500,000.00	CLEARING & GRUBBING - 0007685	\$4,500,000.00
75	205-0001	11379.00	CY	\$5.67	UNCLASS EXCAV	\$64,504.25
80	206-0002	163709.00	CY	\$9.04	BORROW EXCAV, INCL MATL	\$1,479,536.46
30	432-5010	833.00	SY	\$14.72	MILL ASPH CONC PVMT, VARIABLE DEPTH	\$12,259.28
35	433-1000	285.00	SY	\$227.08	REINF CONC APPROACH SLAB	\$64,717.63
190	456-2015	2.00	GLM	\$5,029.33	INDENTATION RUMBLE STRIPS - GROUND-IN-PLACE (SKIP)	\$10,058.66
240	620-0100	1000.00	LF	\$41.67	TEMPORARY BARRIER, METHOD NO. 1	\$41,674.28
255	632-0003	2.00	EA	\$6,793.49	CHANGEABLE MESSAGE SIGN, PORTABLE, TYPE 3	\$13,586.98
170	634-1200	30.00	EA	\$164.14	RIGHT OF WAY MARKERS	\$4,924.13
55	641-1100	84.00	LF	\$83.76	GUARDRAIL, TP T	\$7,035.93
50	641-1200	1200.00	LF	\$21.75	GUARDRAIL, TP W	\$26,097.78
320	641-5001	4.00	EA	\$1,295.75	GUARDRAIL ANCHORAGE, TP 1	\$5,183.01
60	641-5015	4.00	EA	\$2,485.60	GUARDRAIL TERMINAL, TP 12A, 31 IN, TANGENT, ENERGY-ABSORBING	\$9,942.39
305	642-0100	2570.00	LF	\$48.13	CABLE BARRIER	\$123,696.75
265	643-0104	700.00	LF	\$6.64	FIELD FENCE BARBED WIRE, 4 STRANDS	\$4,644.60
65	643-8200	250.00	LF	\$2.82	BARRIER FENCE (ORANGE), 4 FT	\$704.78
<b>Roadway Total</b>						<b>\$7,471,284.71</b>

#### 0110 - Pavement

Line Number	Item	Quantity	Units	Price	Description	Amount
20	310-1101	13035.00	TN	\$34.39	GR AGGR BASE CRS, INCL MATL	\$448,209.39
130	318-3000	50.00	TN	\$46.06	AGGR SURF CRS	\$2,302.81
135	402-1812	50.00	TN	\$154.19	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	\$7,709.33
5	402-3102	1155.00	TN	\$100.00	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, TYPE II, BLEND 1, INCL BITUM MATL & H LIME	\$115,495.97
15	402-3121	2850.00	TN	\$92.03	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	\$262,281.00
10	402-3190	1900.00	TN	\$101.54	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	\$192,928.17
25	413-0750	1750.00	GL	\$6.38	TACK COAT	\$11,160.64
125	439-0019	20100.00	SY	\$118.95	PLAIN PC CONC PVMT, CL 3 CONC, 8 1/2 INCH THK	\$2,390,895.00
300	441-0006	725.00	SY	\$42.00	CONC SLOPE PAV, 6 IN	\$30,450.00
45	441-0016	125.00	SY	\$62.90	DRIVEWAY CONCRETE, 6 IN TK	\$7,861.93
<b>Pavement Total</b>						<b>\$3,469,294.24</b>

#### 0200 - Drainage

Line Number	Item	Quantity	Units	Price	Description	Amount
260	441-0301	2.00	EA	\$3,017.95	CONC SPILLWAY, TP 1	\$6,035.90
365	500-3002	160.00	CY	\$744.52	CLASS AA CONCRETE	\$119,123.28
370	511-1000	20000.00	LB	\$1.23	BAR REINF STEEL	\$24,690.00
350	550-1180	1925.00	LF	\$48.49	STORM DRAIN PIPE, 18 IN, H 1-10	\$93,341.32
140	550-2180	250.00	LF	\$49.04	SIDE DRAIN PIPE, 18 IN, H 1-10	\$12,258.93
355	550-3318	4.00	EA	\$816.58	SAFETY END SECTION 18 IN, STORM DRAIN, 4:1 SLOPE	\$3,266.32
235	550-4118	8.00	EA	\$559.57	FLARED END SECTION 18 IN, SIDE DRAIN	\$4,476.58
145	603-2036	700.00	SY	\$94.55	STN DUMPED RIP RAP, TP 1, 36 IN	\$66,184.76

Line Number	Item	Quantity	Units	Price	Description	Amount
150	603-2181	940.00	SY	\$41.99	STN DUMPED RIP RAP, TP 3, 18 IN	\$39,472.65
155	603-7000	1640.00	SY	\$4.46	PLASTIC FILTER FABRIC	\$7,309.15
360	611-3010	1.00	EA	\$2,080.30	RECONSTR DROP INLET, GROUP 1	\$2,080.30
<b>Drainage Total</b>						<b>\$378,239.19</b>
<b>0300 - Temporary Erosion Control</b>						
Line Number	Item	Quantity	Units	Price	Description	Amount
85	163-0232	4.00	AC	\$257.42	TEMPORARY GRASSING	\$1,029.68
90	163-0240	143.00	TN	\$292.72	MULCH	\$41,859.24
160	163-0301	4.00	EA	\$2,125.03	CONSTRUCT AND REMOVE CONSTRUCTION EXITS	\$8,500.12
210	163-0527	8.00	EA	\$878.17	CONSTRUCT AND REMOVE RIP RAP CHECK DAMS, STONE PLAIN RIP RAP/SAND BAGS	\$7,025.39
180	163-0528	3000.00	LF	\$9.05	CONSTRUCT AND REMOVE FABRIC CHECK DAM - TYPE C SILT FENCE	\$27,137.70
215	163-0541	6.00	EA	\$1,075.58	CONSTRUCT AND REMOVE ROCK FILTER DAMS	\$6,453.50
120	165-0010	5500.00	LF	\$0.55	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	\$3,035.01
310	165-0030	500.00	LF	\$0.64	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	\$319.10
175	165-0041	3200.00	LF	\$2.48	MAINTENANCE OF CHECK DAMS - ALL TYPES	\$7,950.37
165	165-0101	4.00	EA	\$629.69	MAINTENANCE OF CONSTRUCTION EXIT	\$2,518.75
220	165-0110	6.00	EA	\$272.15	MAINTENANCE OF ROCK FILTER DAM	\$1,632.89
315	165-0310	2.00	EA	\$782.18	MAINTENANCE OF CONSTRUCTION EXIT TIRE WASH AREA (PER EACH)	\$1,564.37
230	167-1000	5.00	EA	\$321.63	WATER QUALITY MONITORING AND SAMPLING	\$1,608.15
225	167-1500	18.00	MO	\$622.45	WATER QUALITY INSPECTIONS	\$11,204.02
345	169-0035	1.00	EA	\$39,406.00	SAND FILTER, NO. - 1	\$39,406.00
115	171-0010	11000.00	LF	\$2.78	TEMPORARY SILT FENCE, TYPE A	\$30,587.81
205	171-0030	1000.00	LF	\$4.69	TEMPORARY SILT FENCE, TYPE C	\$4,686.74
185	711-0100	32137.00	SY	\$4.23	TURF REINFORCING MATTING, TP 1	\$135,824.46
<b>Temporary Erosion Control Total</b>						<b>\$332,343.30</b>
<b>0400 - Permanent Erosion Control</b>						
Line Number	Item	Quantity	Units	Price	Description	Amount
95	700-6910	7.00	AC	\$1,926.29	PERMANENT GRASSING	\$13,484.04
100	700-7000	14.00	TN	\$274.85	AGRICULTURAL LIME	\$3,847.87
105	700-8000	2.00	TN	\$1,837.07	FERTILIZER MIXED GRADE	\$3,674.15
110	700-8100	350.00	LB	\$1.36	FERTILIZER NITROGEN CONTENT	\$475.86
<b>Permanent Erosion Control Total</b>						<b>\$21,481.92</b>
<b>0600 - Signing</b>						
Line Number	Item	Quantity	Units	Price	Description	Amount
340	500-3101	36.00	CY	\$1,479.90	CLASS A CONCRETE	\$53,276.48
290	636-1033	40.00	SF	\$23.44	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	\$937.66
335	636-1077	50.00	SF	\$28.36	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 9	\$1,417.88
295	636-2010	300.00	LF	\$9.44	GALV STEEL POSTS, TP 1	\$2,832.04
<b>Signing Total</b>						<b>\$58,464.06</b>
<b>0610 - Pavement Marking</b>						
Line Number	Item	Quantity	Units	Price	Description	Amount
325	653-1704	70.00	LF	\$7.90	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	\$553.18
270	653-2501	4.00	LM	\$2,634.99	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	\$10,539.95
275	653-2502	3.00	LM	\$2,633.03	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	\$7,899.08
280	657-1054	7150.00	LF	\$5.05	PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, WHITE, TP PB	\$36,093.13
285	657-6054	7150.00	LF	\$4.72	PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, YELLOW, TP PB	\$33,740.28
330	657-8150	60.00	GLF	\$15.00	PREFORMED PLASTIC SKIP PAVEMENT MARKING, 24 IN, CONTRAST (BLACK-WHITE), TP PB	\$900.00
<b>Pavement Marking Total</b>						<b>\$89,725.62</b>
<b>0801 - Bridge 1</b>						
Line Number	Item	Quantity	Units	Price	Description	Amount
70	543-9000	1.00	LS	\$1,641,220.00	CONSTRUCTION OF BRIDGE COMPLETE - 140\$/sf - 11,723sf	\$1,641,220.00
375	627-1000	19250.00	SF	\$65.00	MSE WALL FACE, 0 - 10 FT HT, WALL NO - ~\$65/sf	\$1,251,250.00
380	627-1010	12300.00	SF	\$65.00	MSE WALL FACE, 10 - 20 FT HT, WALL NO - ~\$65/sf	\$799,500.00
385	627-1020	4450.00	SF	\$65.00	MSE WALL FACE, 20 - 30 FT HT, WALL NO - ~\$65/sf	\$289,250.00
<b>Bridge 1 Total</b>						<b>\$3,981,220.00</b>

**TOTALS FOR CONCEPT NAME 0007685**

ITEMS COST:	\$15,802,053.04
TYPICAL SECTION:	\$0.00
AdHoc PRICING:	\$0.00
ESTIMATED COST:	\$15,802,053.04
CONTINGENCY PERCENT:	
ENGINEERING AND INSPECTION:	
ESTIMATED COST WITH CONTINGENCY AND E&I:	

CONFIDENTIALITY NOTICE: This document may contain confidential and/or privileged information. Any unauthorized duplication, disclosure,distribution/retransmission of taking of any action in reliance upon the material in this document is strictly forbidden.

GEORGIA DEPARTMENT OF TRANSPORTATION  
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 4/5/2021 Project: 7685  
Revised: County: Oconee  
Alignment "B" PI: 7685  
Description: S.R. 8 /S.R. 316/US 29 @CR58/Dials Mill Ext  
Project Termini:

Existing ROW: Varies  
Parcels: 18 Required ROW: Varies

Land and Improvements \$1,426,537.50

Proximity Damage	\$250,000.00
Consequential Damage	\$0.00
Cost to Cures	\$22,000.00
Trade Fixtures	\$0.00
Improvements	\$375,000.00

Valuation Services \$108,125.00

Legal Services \$124,650.00

Relocation \$82,000.00

Demolition \$38,000.00

Administrative \$156,000.00

TOTAL ESTIMATED COSTS \$1,935,312.50

**TOTAL ESTIMATED COSTS (ROUNDED) \$1,936,000.00**

Prepared By:

Robert O'Rourke  
Print Name

Signature

Date

Cost Estimation Supervisor :

Valencia Carter

Valencia Carter

5/12/2021

Print Name

Signature

Date

NOTE: Supervisor is only attesting that the estimate was completed using the correct information provided for the the project. The Supervisor is not attesting to property values or the accuracy of the market value estimations provided in this report. No Market Appreciation is included in this Preliminary Cost Estimate.

Comments: On Site Inspection 3/30/2021.





## Interoffice Memo

### FILE

Project No: CSNHS-0007-00(685)  
 County: Oconee  
 P.I.#: 0013763 & 0007685 (ALT "B")

Office: GAINESVILLE  
 Date: January 26, 2021

Description: SR 8/SR 316/US 29 @ CR 60/Dials Mill Rd & CR 58/Dials Mill Ext (ALT "B")

FROM: Yulonda Pride-Foster, District Utilities Manager

TO: Jonathan Digioia, Project Manager

SUBJECT: PRELIMINARY UTILITY COST ESTIMATE

A review of utilities located on the above referenced project has been conducted with Concept Layout plans. Listed below is a breakdown of the anticipated reimbursable and non-reimbursable cost.

Utility Owner	Reimbursable	Non-Reimbursable	In Contract/CIA (Non-Reimbursable)	Estimate Based on
Walton EMC	\$385,000.00	\$0.00	\$0.00	Site Visit / Available Drawings
Georgia Power Co - Distribution	\$260,000.00	\$0.00	\$0.00	Site Visit / Available Drawings
AT&T Telecom	\$0.00	\$95,400.00	\$0.00	Site Visit / Available Drawings
Comcast Telecom	\$0.00	\$72,000.00	\$0.00	Site Visit / Available Drawings
Fiberlight Fiber	\$0.00	\$232,600.00	\$0.00	Site Visit / Available Drawings
Oconee County - Water **	\$0.00	\$0.00	\$378,500.00	Site Visit / Available Drawings
Southern Company - Gas (AGL)	\$100,000.00	\$360,000.00	\$0.00	Site Visit / Available Drawings
Total 100.00%	\$745,000.00	\$760,000.00	\$378,500.00	
Department Responsibility 100.00%	\$745,000.00			
Local Sponsor Responsibility 0.00%	\$0.00			PFA Dated N/A with N/A

\*\* Indicates Potential Utility Aid Request from Local Gov't

Estimate is based on the best available information at the current stage, unforeseen prior rights information may be provided by the Utility Company at a later date that could cause some non-reimbursable costs to shift to the reimbursable cost column.

If the Local Govts request and are granted Utility Aid, the Reimbursable Costs could increase by as much as \$378,500.00 bringing the total Reimbursable Costs to \$1,123,500.00.

If additional information is needed, please contact Yulonda Pride-Foster at 770-533-8320 or Lynn Palmer at 770-533-8319.

cc: Patrick Allen, State Utilities Administrator  
 Marcela Coll, State Utilities Preconstruction Manager  
 Sue Anne Decker, District Preconstruction Engineer  
 Shannon Giles, Area Manager  
 File

## 4. Crash Summaries and Diagrams



# GEARS Public Crash Analysis Report

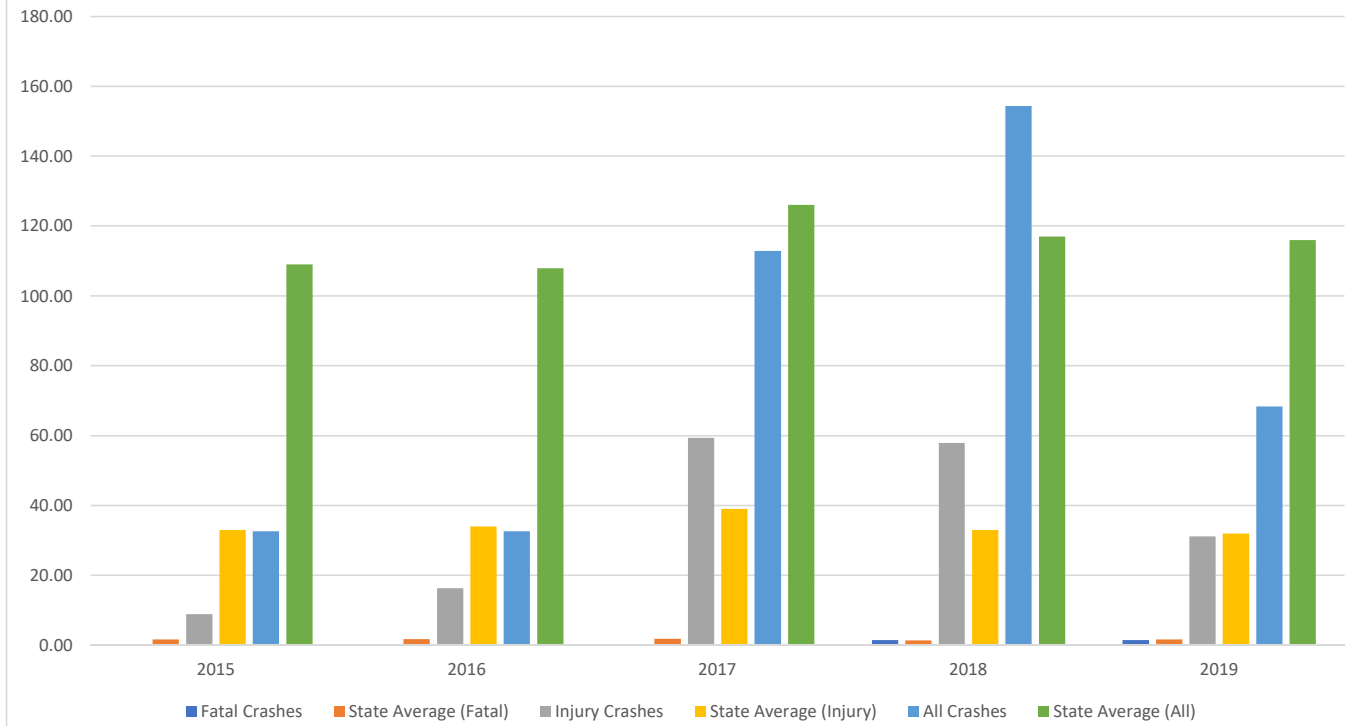
Processed on: Mar-08-2021 04:14 PM

# of Accidents		# of Injuries	# of Fatalities
225		14	0

County	Route Type	Road Number	Accident ID	Accident Date	Accident Time	Mile	Intersection Type	Intersection Number	Ramp	# of Inj	# of Fatal	Manner of Collision	First Harmful Event
OCONEE	State Route (SR)	31600	6675241	Feb-15-2018	4:41:00	0		DIALS MILL EXT	0	0	0	Not A Collision with Motor Vehicle	Deer
OCONEE	State Route (SR)	31600	5727325	Apr-19-2016	18:07:00	0		DIALS MILL EXT	0	3	0	Angle	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	5812362	May-10-2016	17:30:00	0		DIALS MILL EXT	0	0	0	Angle	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	6161530	Jan-19-2017	18:19:00	0		DIALS MILL EXT	0	0	0	Sideswipe- Opposite Direction	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	6602785	Nov-16-2017	13:56:00	0		DIALS MILL EXT	0	0	0	Angle	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	7219770	Mar-17-2019	19:20:00	0		DIALS MILL EXT	0	5	0	Head On	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	7474198	Oct-19-2019	11:04:00	0		DIALS MILL EXT	0	1	0	Angle	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	6103960	Jan-30-2017	7:40:00	0		DIALS MILL RD	0	2	0	Angle	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	6161512	Jan-10-2017	0:01:00	0		DIALS MILL RD	0	0	0	Not A Collision with Motor Vehicle	Ditch
OCONEE	State Route (SR)	31600	6654414	Jan-05-2018	5:55:00	0		DIALS MILL RD	0	1	0	Sideswipe- Same Direction	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	6870240	Jul-11-2018	0:00:00	0		DIALS MILL RD	0	0	0	Angle	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	6870242	Jul-11-2018	12:14:00	0		DIALS MILL RD	0	0	0	Angle	Motor Vehicle In Motion
OCONEE	State Route (SR)	31600	6970566	Sep-01-2018	3:27:00	0		DIALS MILL RD	0	1	0	Not A Collision with Motor Vehicle	Tree
OCONEE	State Route (SR)	31600	7002343	Oct-21-2018	1:55:00	0		DIALS MILL RD	0	1	0	Angle	Motor Vehicle In Motion

0 14 0

SR 316 Crash Rate  
Between Barber Creek Road and SR 78



## 5. Design Traffic Diagrams



## Interoffice Memo

**DATE:** 11/2/2020

**FROM:** Matt Markham, Deputy Director of Planning

**TO:** Kimberly Nesbitt, State Program Delivery Administrator

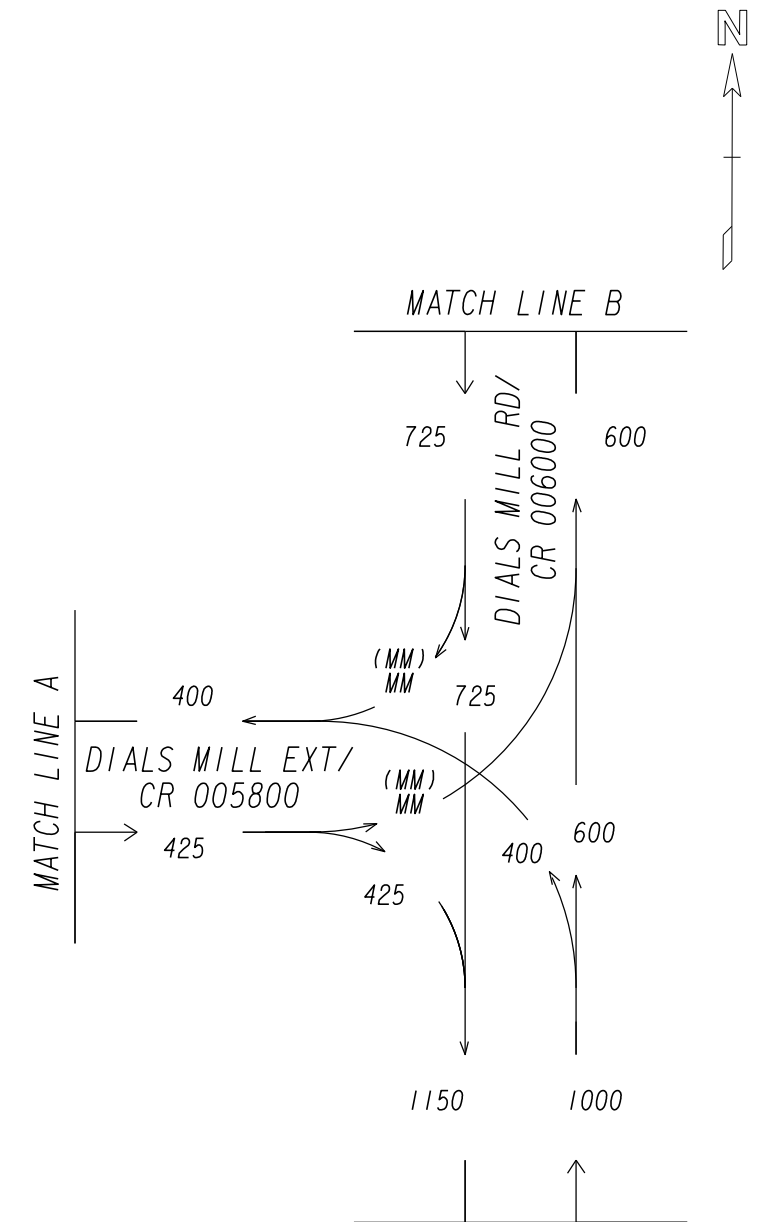
**Attention:** Jonathan Digioia

**SUBJECT:** Design Traffic Forecasts for PI# 0007685 & 0013763 Oconee County, SR 8/SR 316/US 29 @ CR 58/DIALS MILL EXT & SR 8/SR 316/US 29 @ CR 60/DIALS MILL ROAD

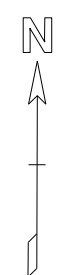
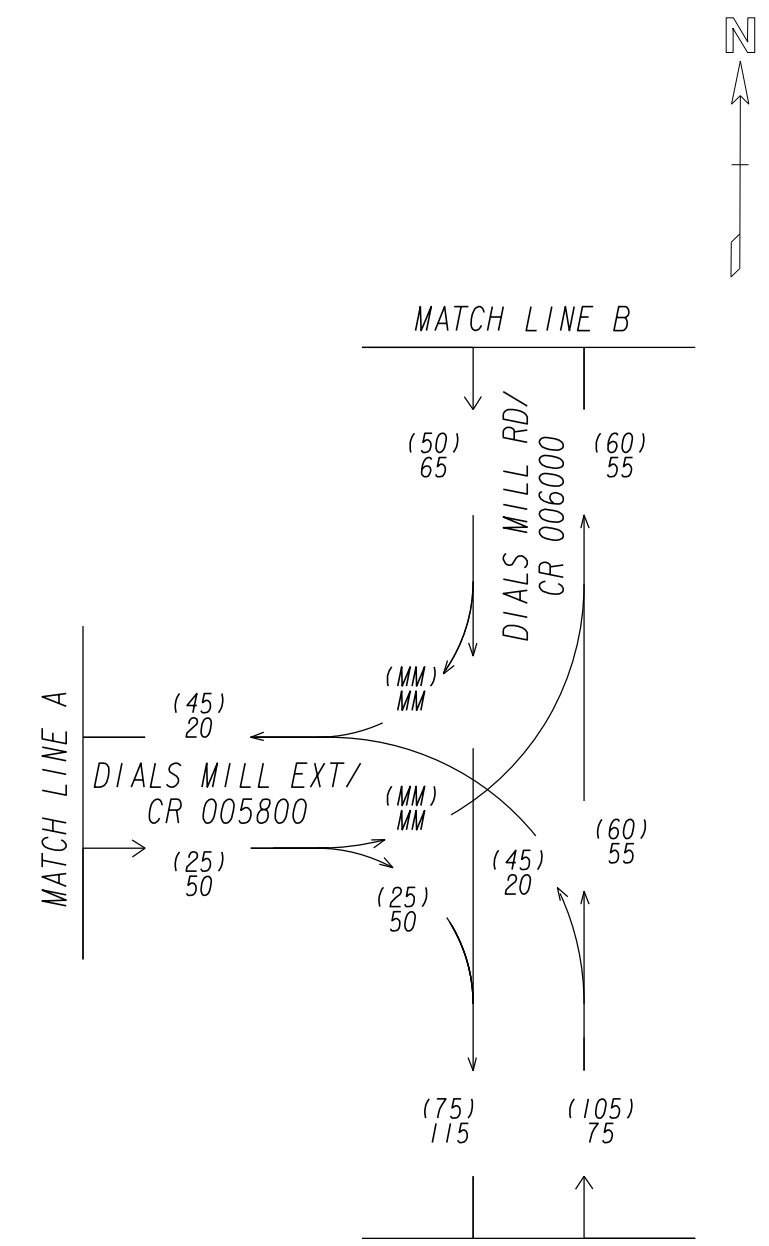
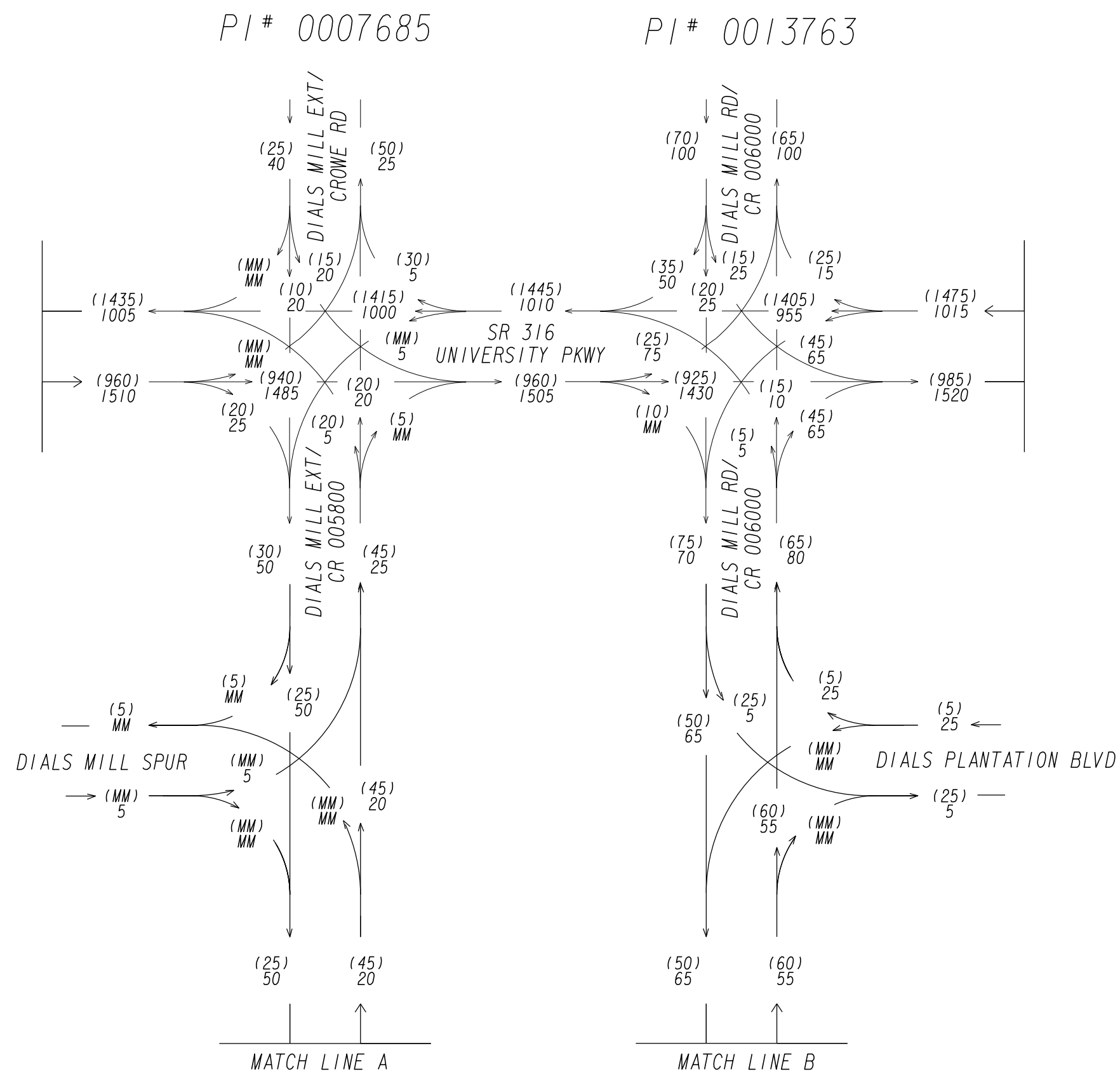
Per request, we have attached the approved design traffic for the above project.

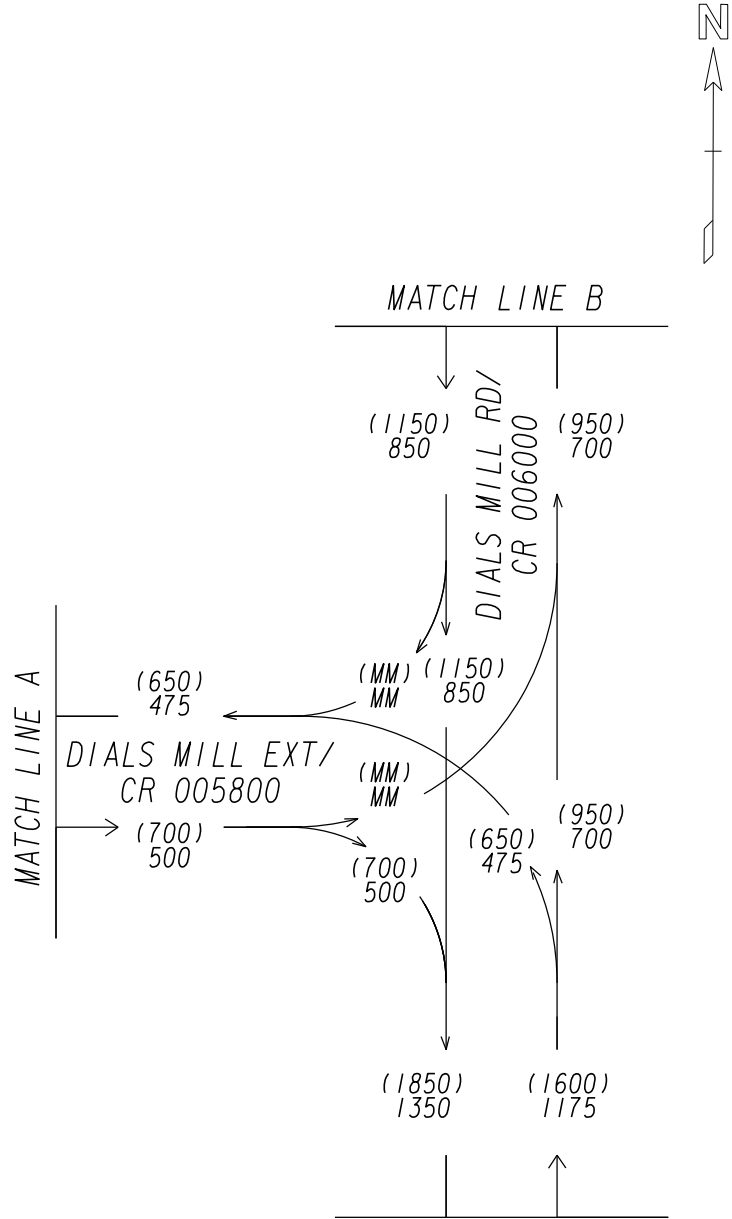
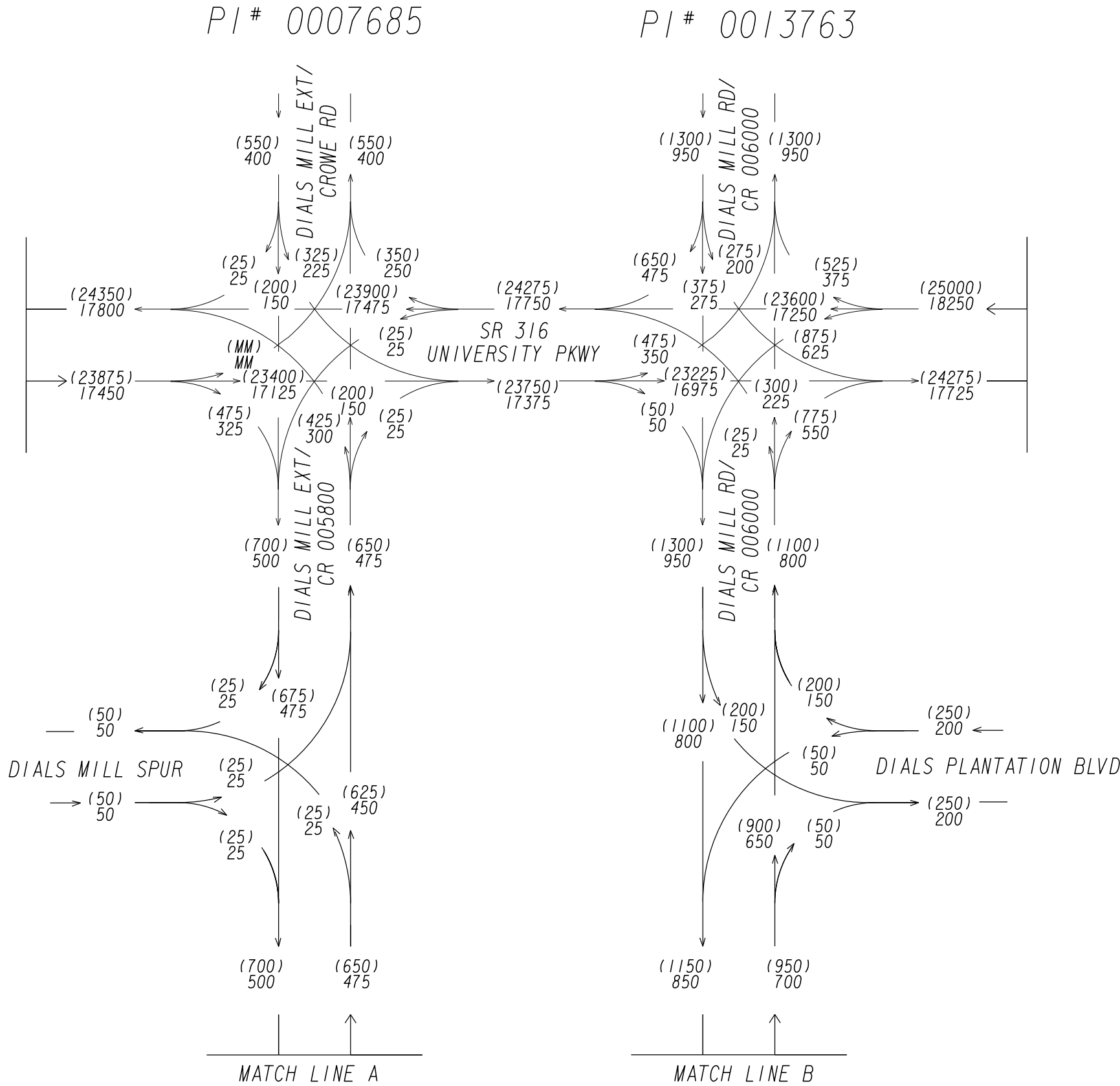
If you have any questions concerning this information, please contact Dan Funk at 404 631 1959.

RPT/df



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VERIFIED: DRF	DATE:	





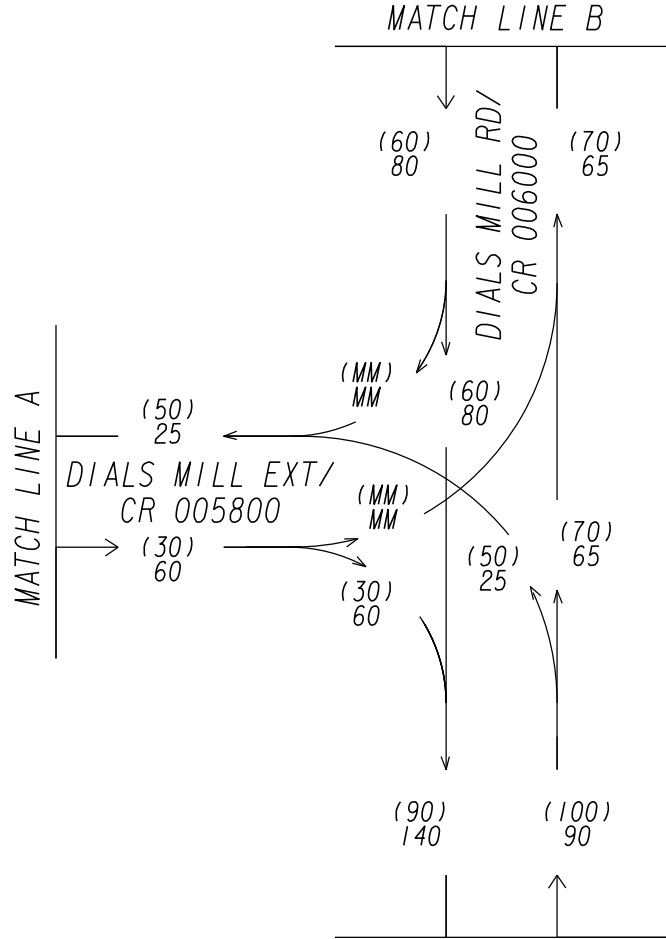
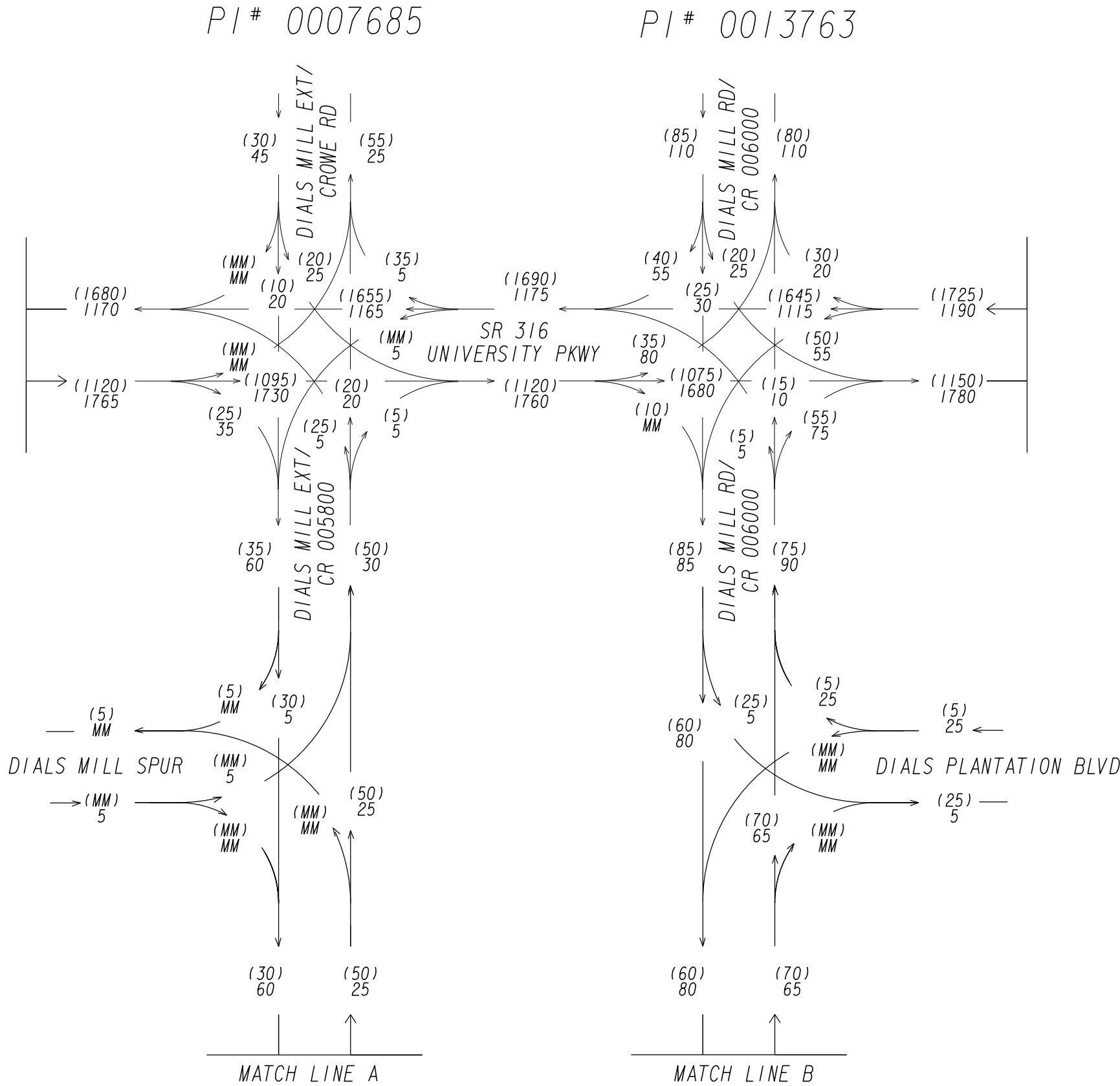
OCONEE COUNTY PI# 0007685  
SR 8/ SR 316/ US 29 AT  
CR 58/ DIALS MILL EXT  
PI# 0013763  
SR 8/ SR 316/ US 29 AT  
CR 60/ DIALS MILL ROAD

2047 AADT= (000)  
2027 AADT= 000  
NO BUILD



SR 316  
24 HOUR T= 19.0%  
SU= 17.0%  
COMB= 2.0%

REVISION DATES			TRAFFIC DIAGRAM			
10/2017						
10/2020						
			CHECKED:		DATE:	DRAWING No.
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			VERIFIED:	DRF	DATE:	



OCONEE COUNTY PI# 0007685  
SR 8/ SR 316/ US 29 AT  
CR 58/ DIALS MILL EXT  
PI# 0013763  
SR 8/ SR 316/ US 29 AT  
CR 60/ DIALS MILL ROAD

2027 PM DHV = (000)  
2027 AM DHV = 000  
NO BUILD

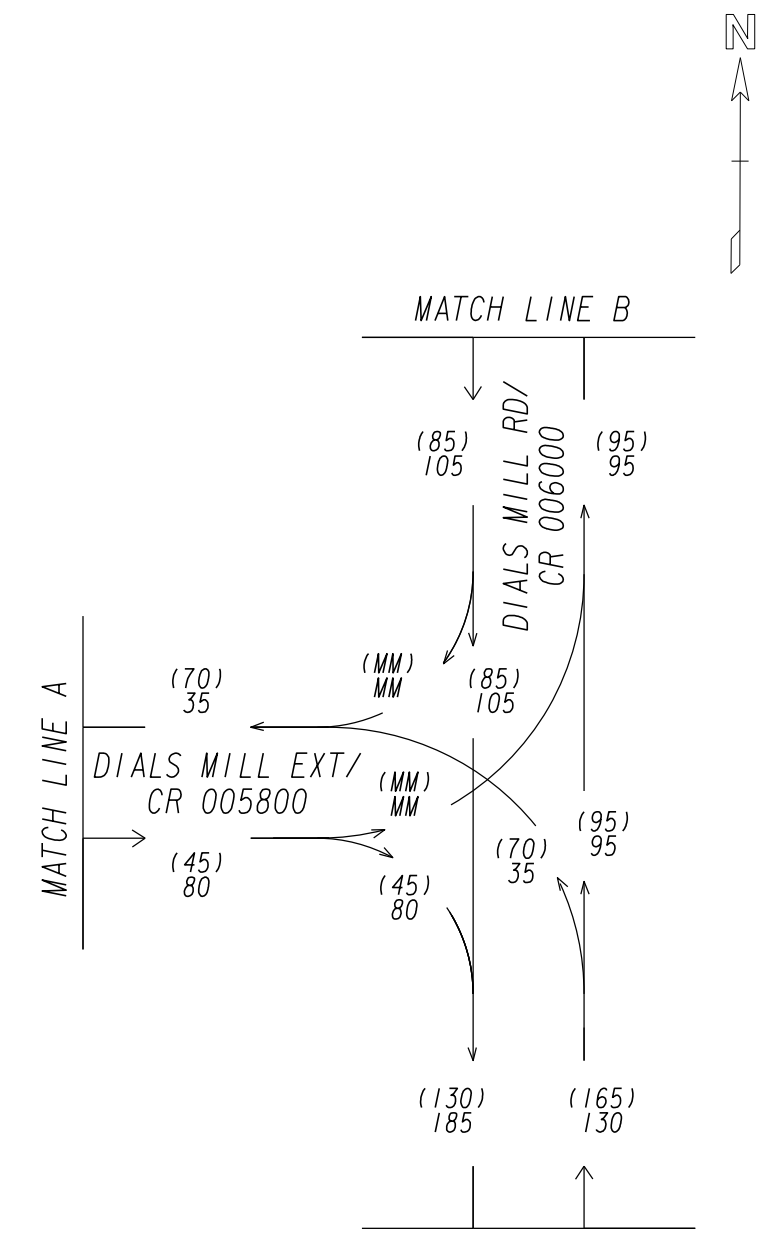
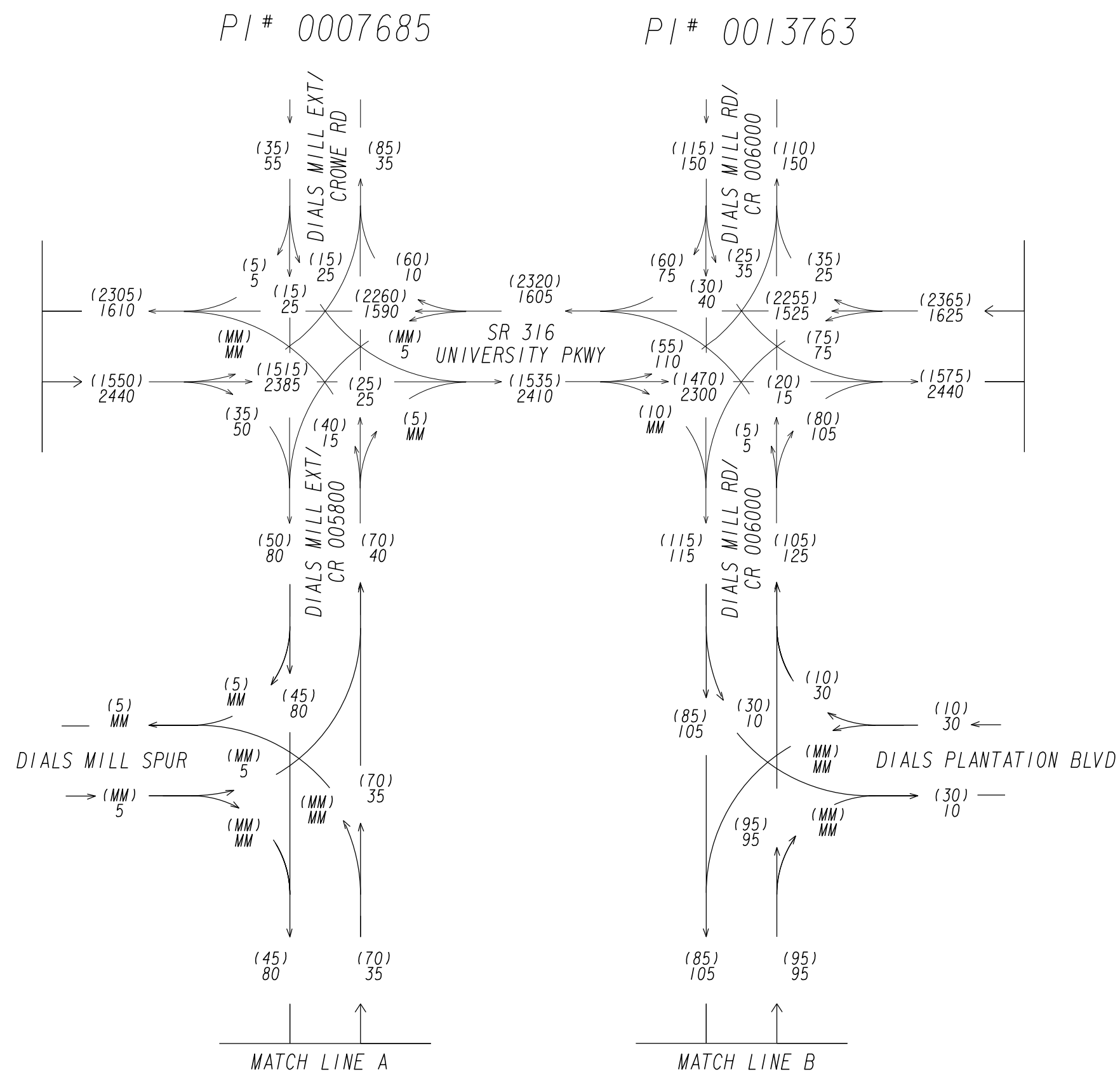


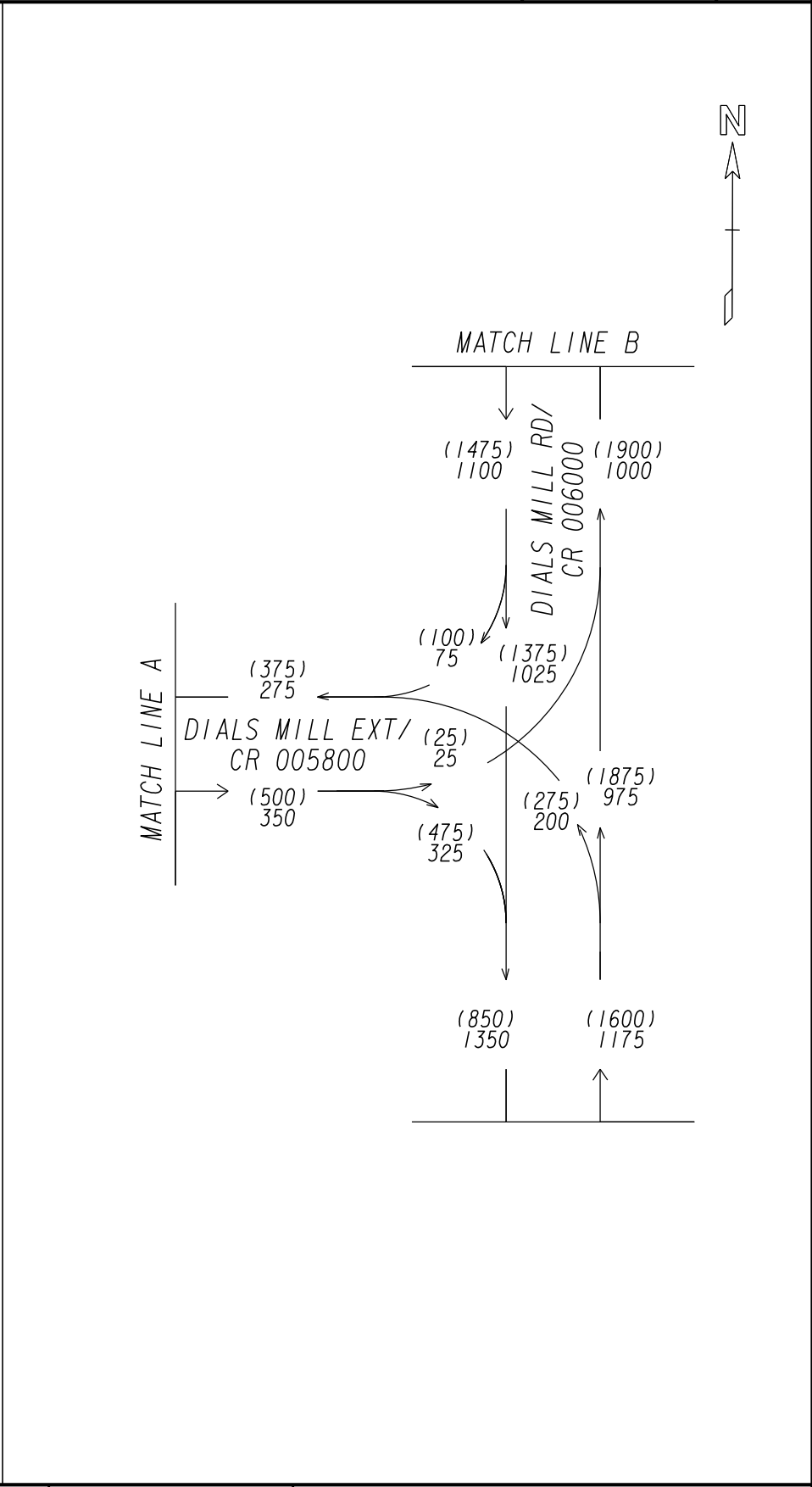
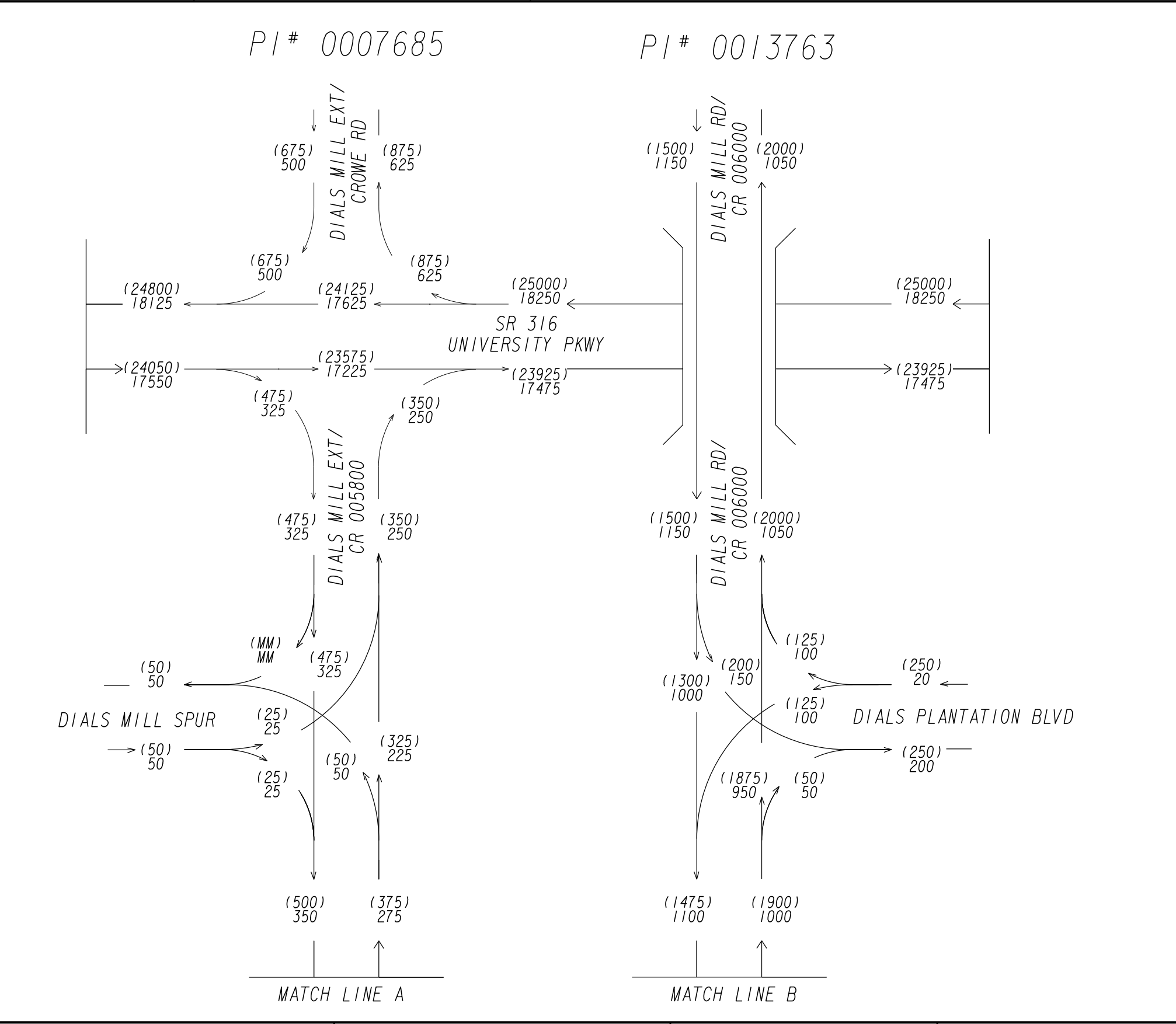
SR 316  
AM (PM) T= 15.5% (15%)  
AM (PM) SU= 14.5% (14.5%)  
AM (PM) COMB= 1% (0.5%)

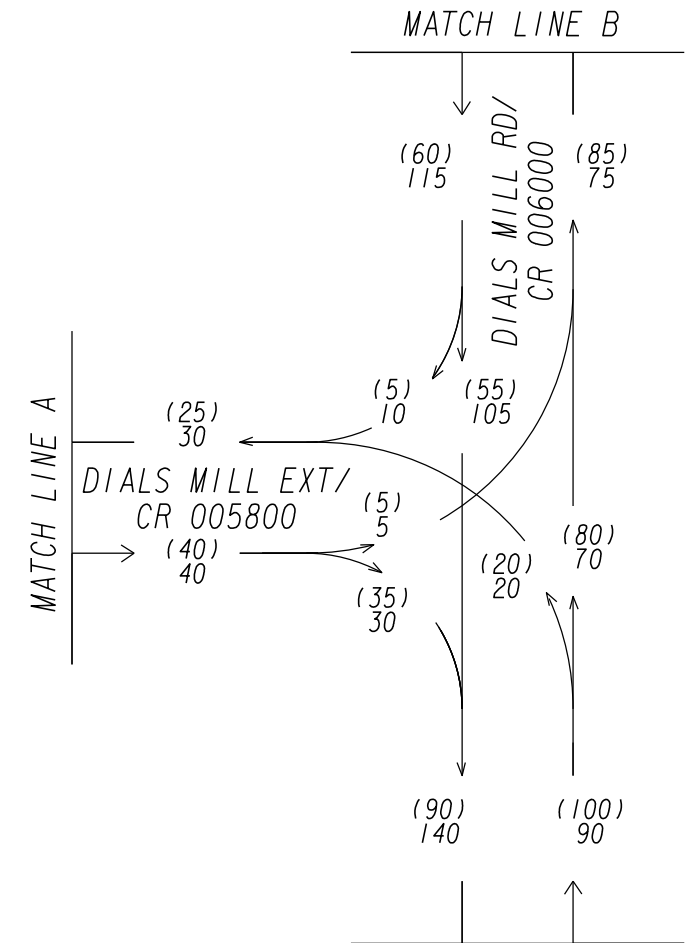
REVISION DATES		
10/2017		
10/2020		

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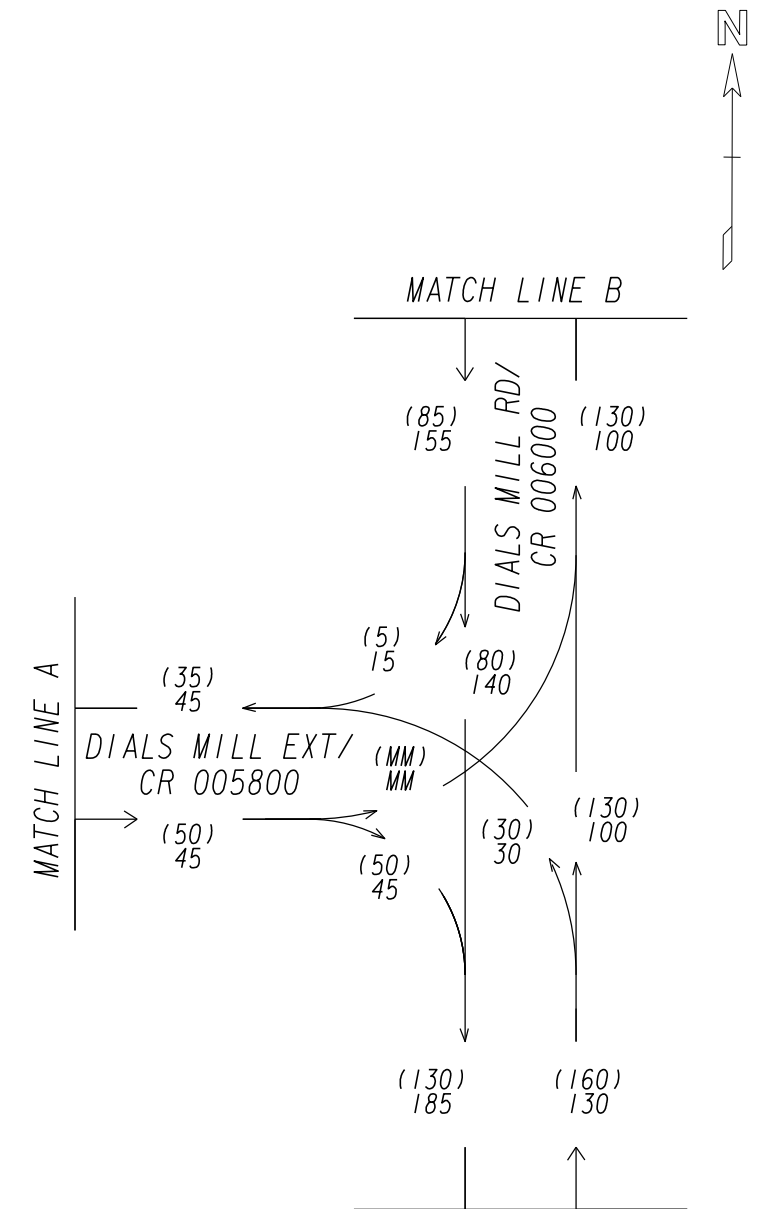




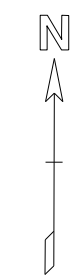
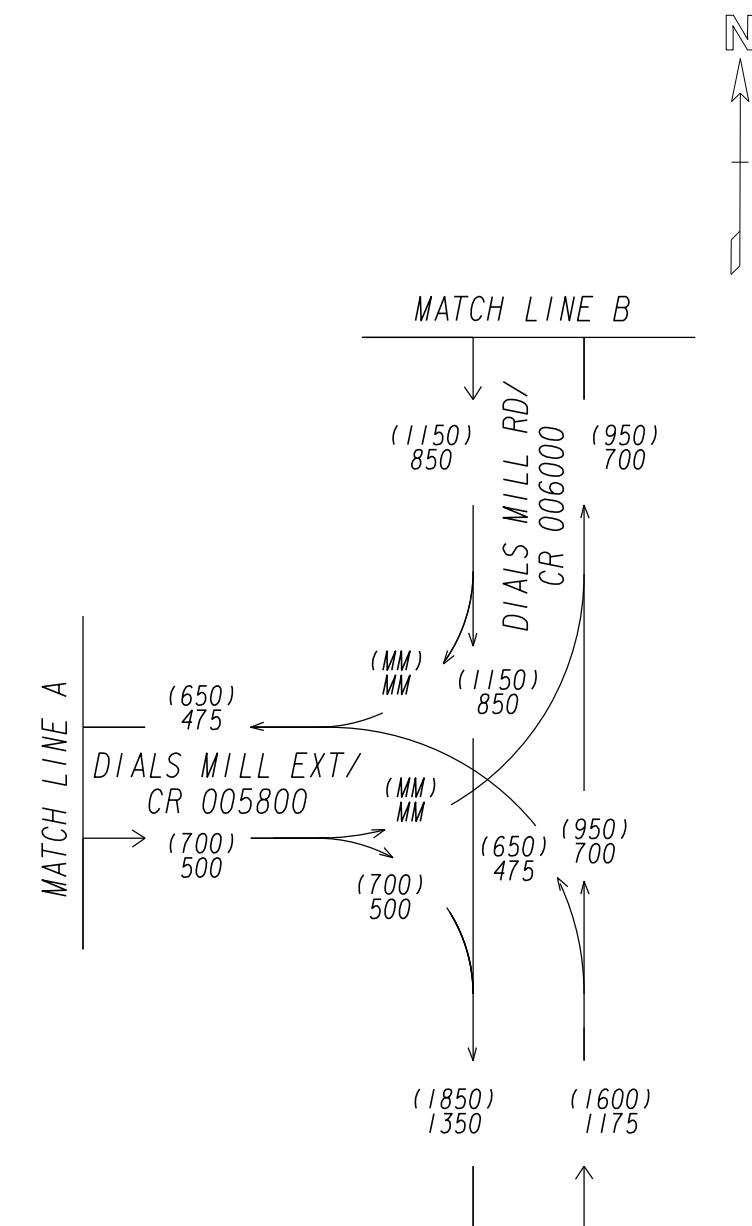
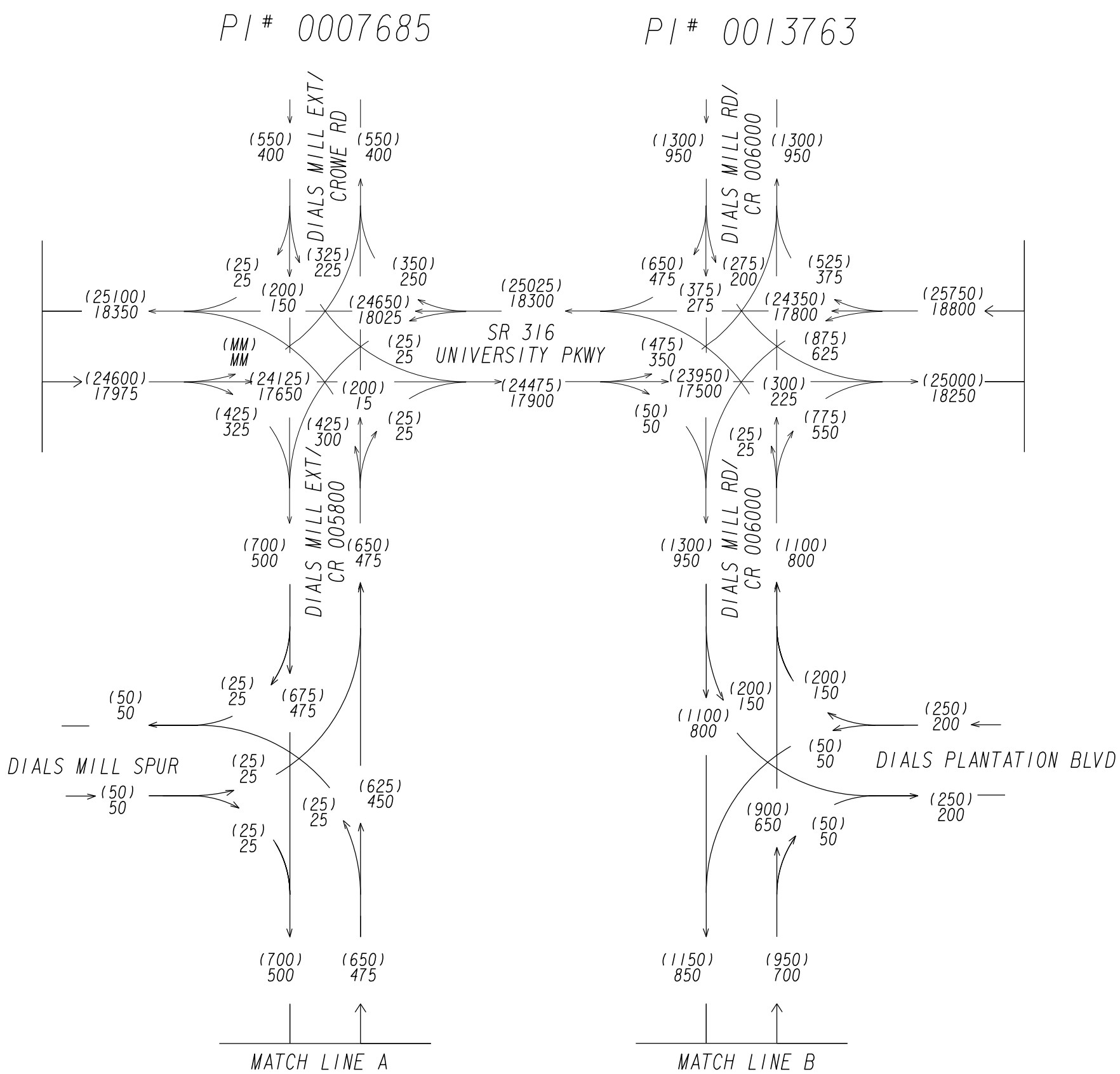


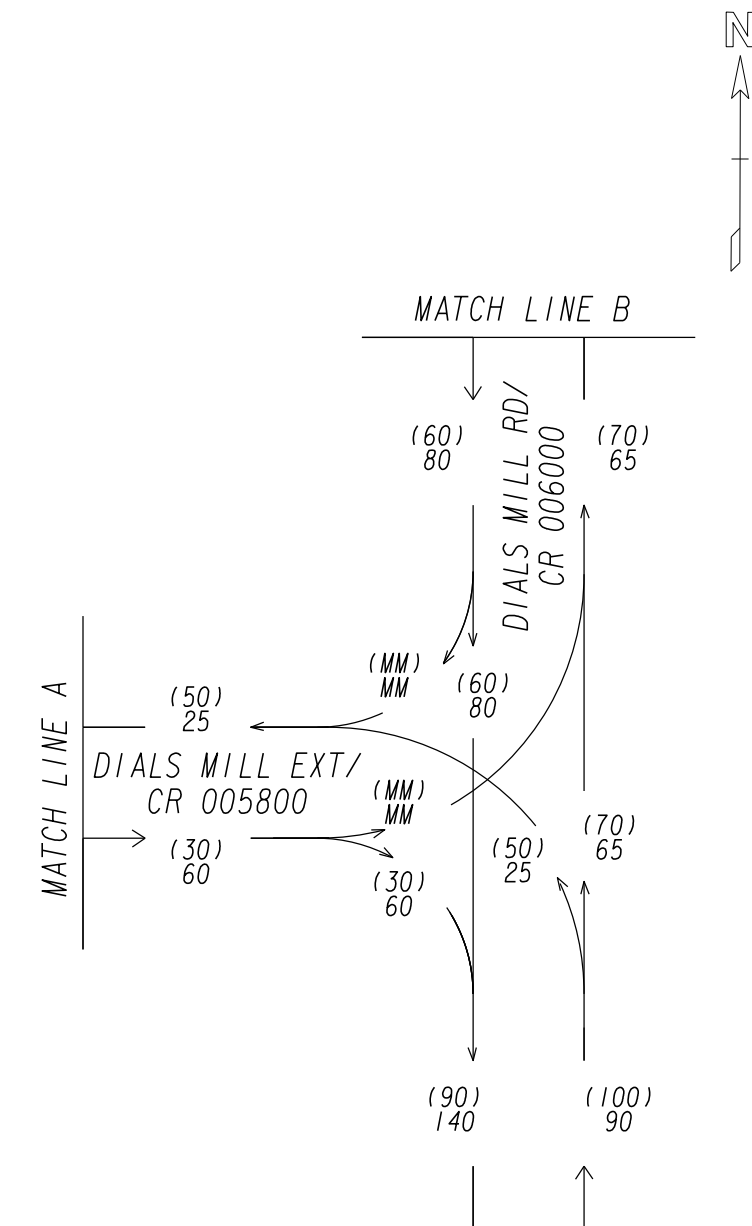
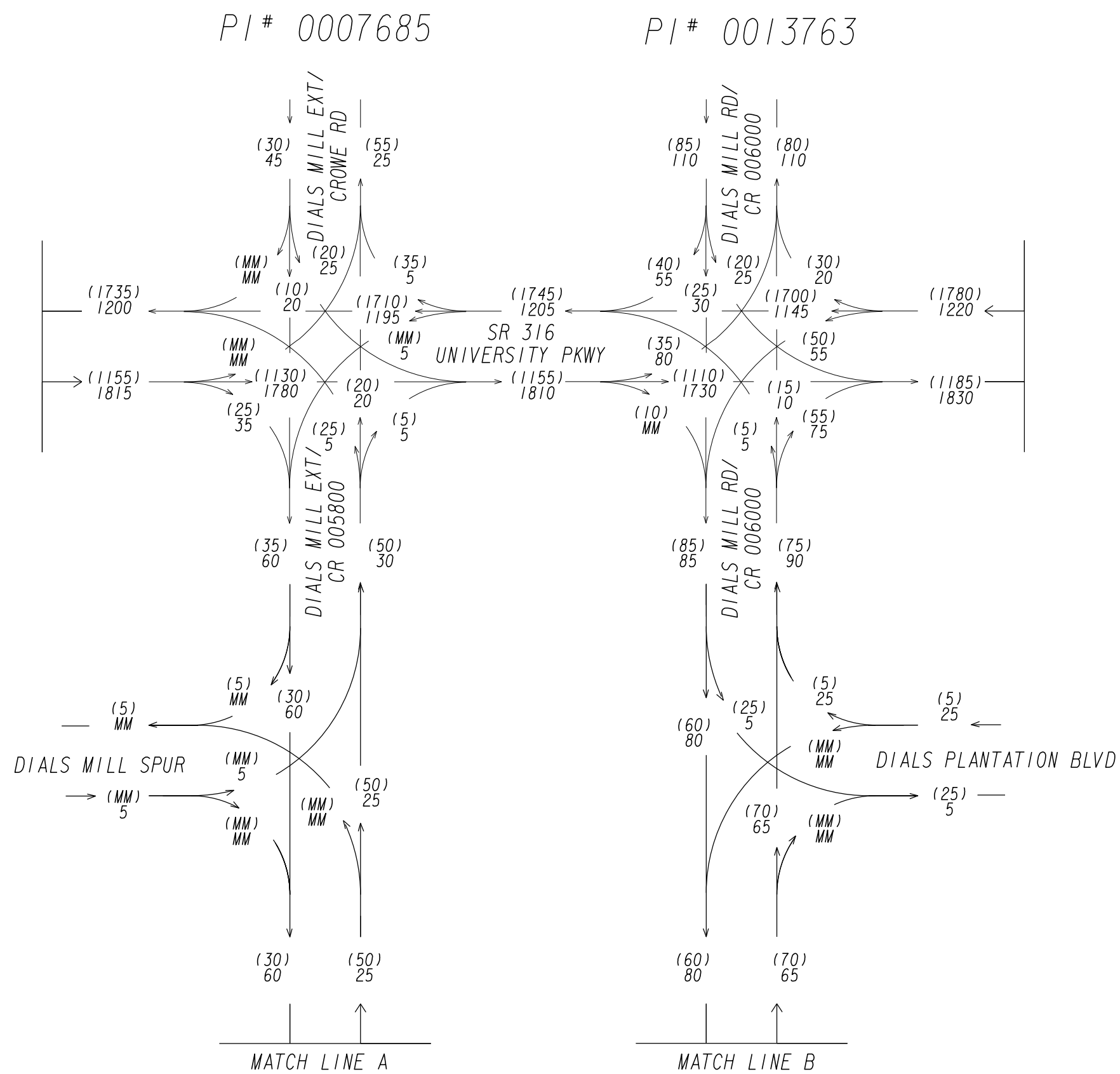


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VERIFIED: DRF	DATE:	



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			DRAWING No.
			10-08





OCONEE COUNTY PI# 0007685  
SR 8/ SR 316/ US 29 AT  
CR 58/ DIALS MILL EXT  
PI# 0013763  
SR 8/ SR 316/ US 29 AT  
CR 60/ DIALS MILL ROAD

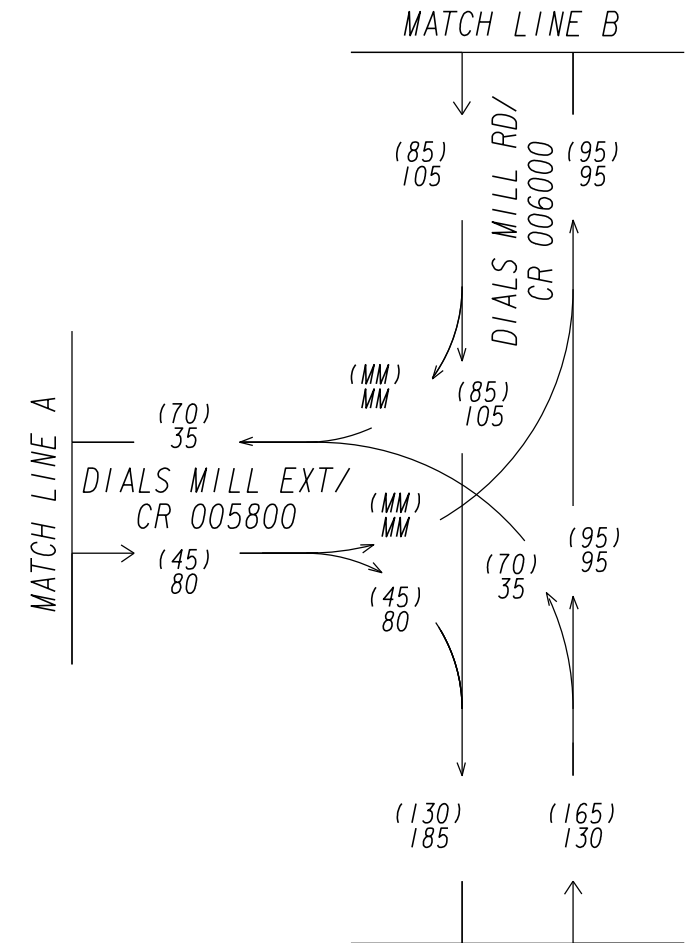
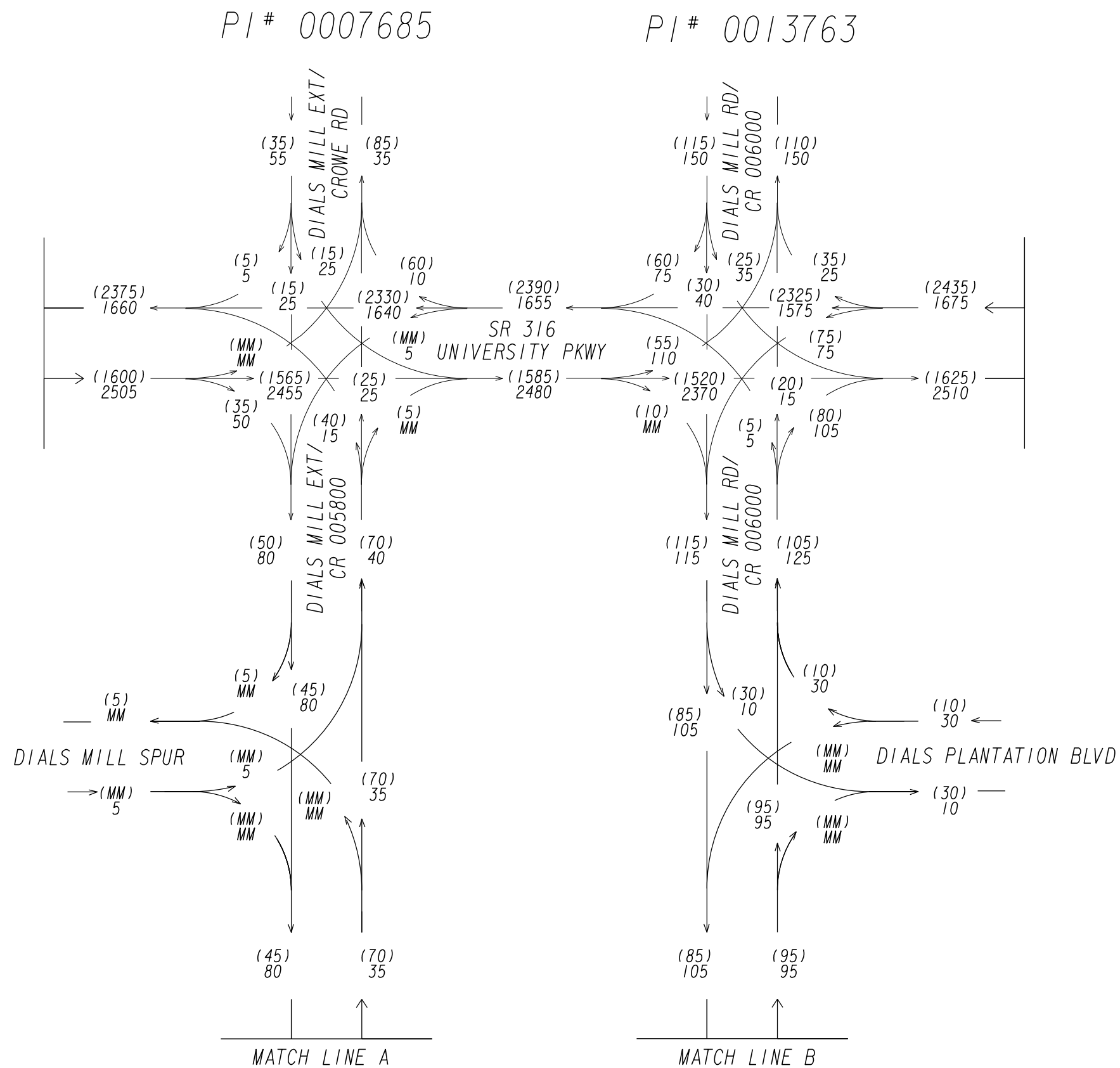
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2029 AM DHV = 000  
NO BUILD



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AM (PM) SU= 14.5% (14.5%)  
AM (PM) COMB= 1% (0.5%)

REVISION DATES			TRAFFIC DIAGRAM			
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10/2020						
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			VERIFIED:	DRF	DATE:	





OCONEE COUNTY PI# 0007685  
SR 8/ SR 316/ US 29 AT  
CR 58/ DIALS MILL EXT  
PI# 0013763  
SR 8/ SR 316/ US 29 AT  
CR 60/ DIALS MILL ROAD

```
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2049 AM DHV = 000
NO BUILD
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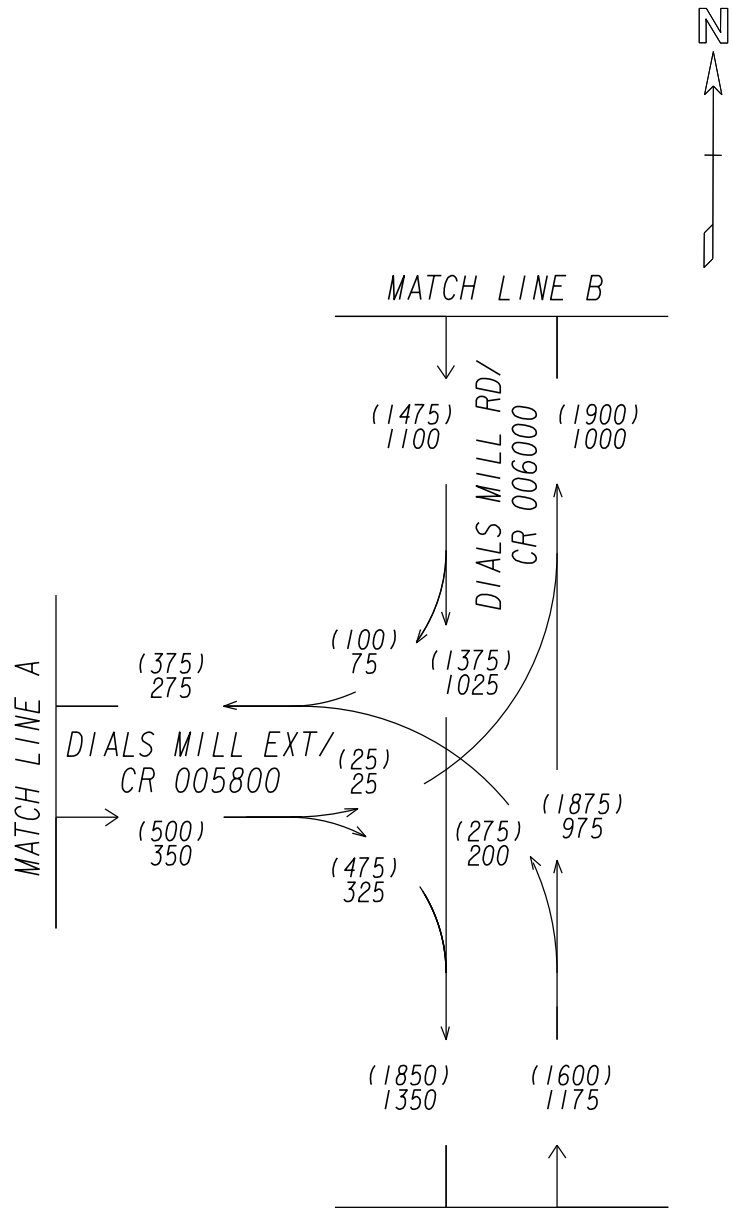
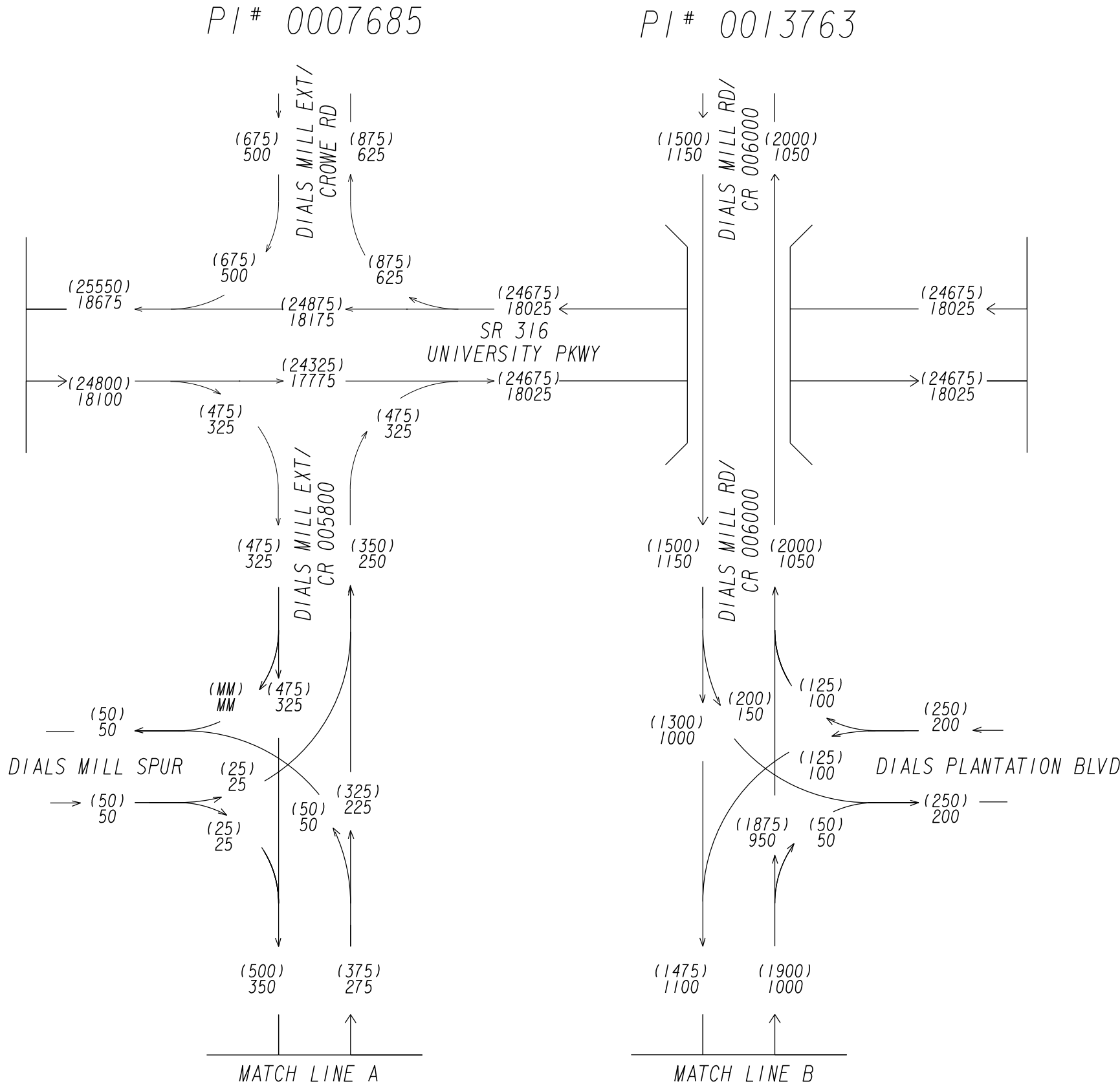


SR 316  
AM (PM) T= 15.5% (15%)  
AM (PM) SU= 14.5% (14.5%)  
AM (PM) COMB= 1% (0.5%)

REVISION DATES		
10/2017		
10/2020		

### TRAFFIC DIAGRAM

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BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED: DRF	DATE:	



OCONEE COUNTY PI# 0007685  
SR 8/ SR 316/ US 29 AT  
CR 58/ DIALS MILL EXT  
PI# 0013763  
SR 8/ SR 316/ US 29 AT  
CR 60/ DIALS MILL ROAD

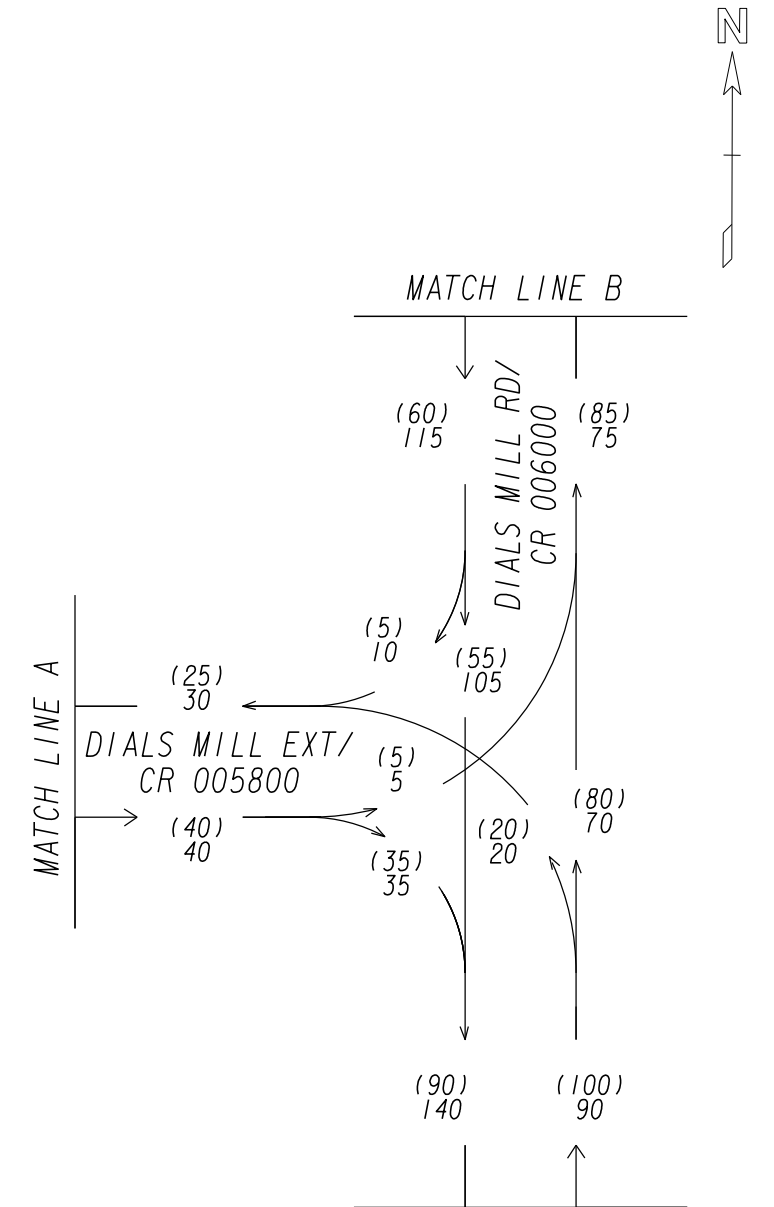
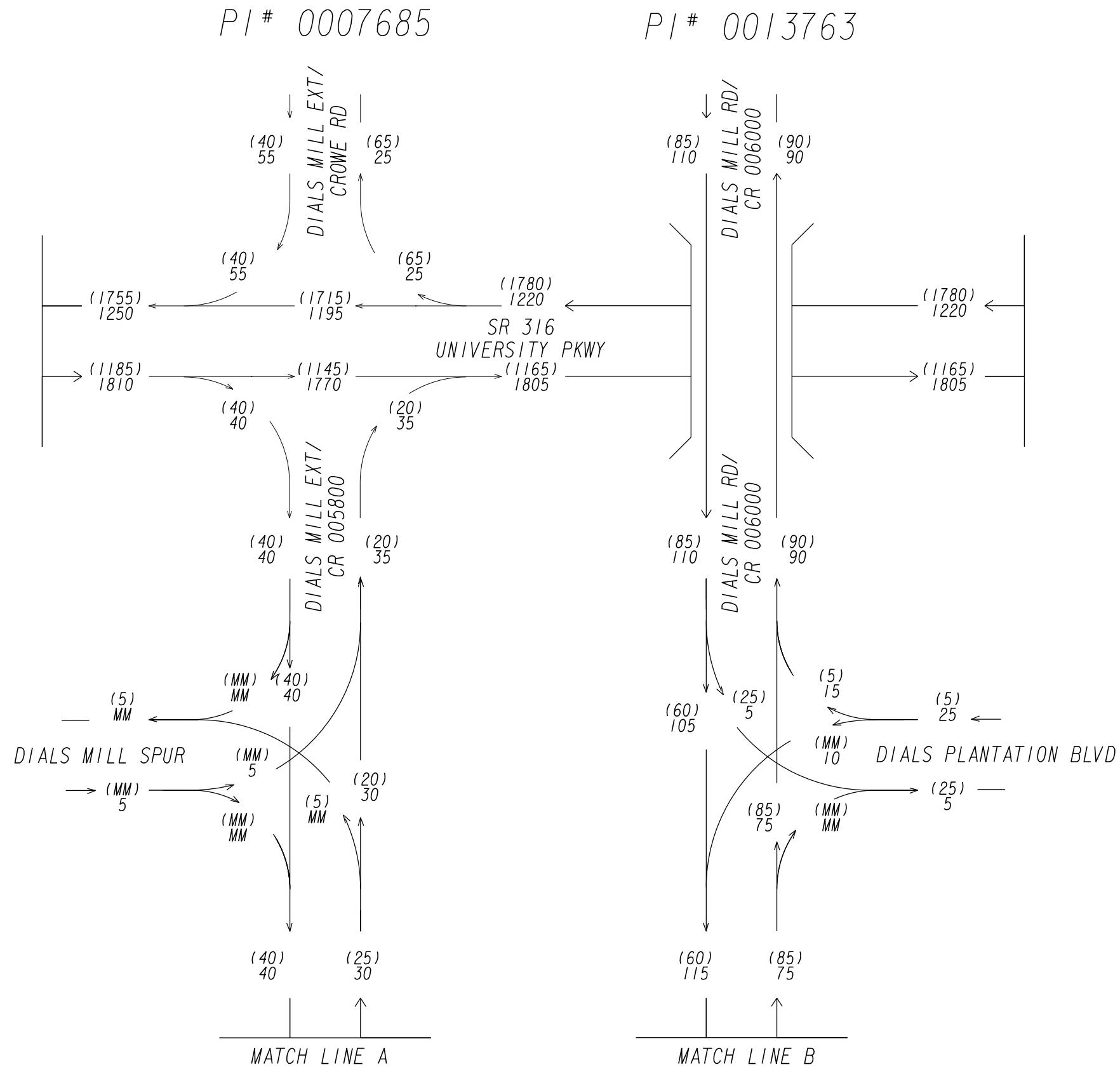
2049 AADT= (000)  
2029 AADT= 000  
BUILD



SR 316  
24 HOUR T= 19.0%  
SU= 17.0%  
COMB= 2.0%

REVISION DATES		
10/2017		
10/2020		

TRAFFIC DIAGRAM			
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CORRECTED:		DATE:	
VERIFIED:	DRF	DATE:	
DRAWING No.			10- 12



OCONEE COUNTY PI# 0007685  
SR 8/ SR 316/ US 29 AT  
CR 58/ DIALS MILL EXT  
PI# 0013763  
SR 8/ SR 316/ US 29 AT  
CR 60/ DIALS MILL ROAD

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2029 AM DHV = 000
BUILD
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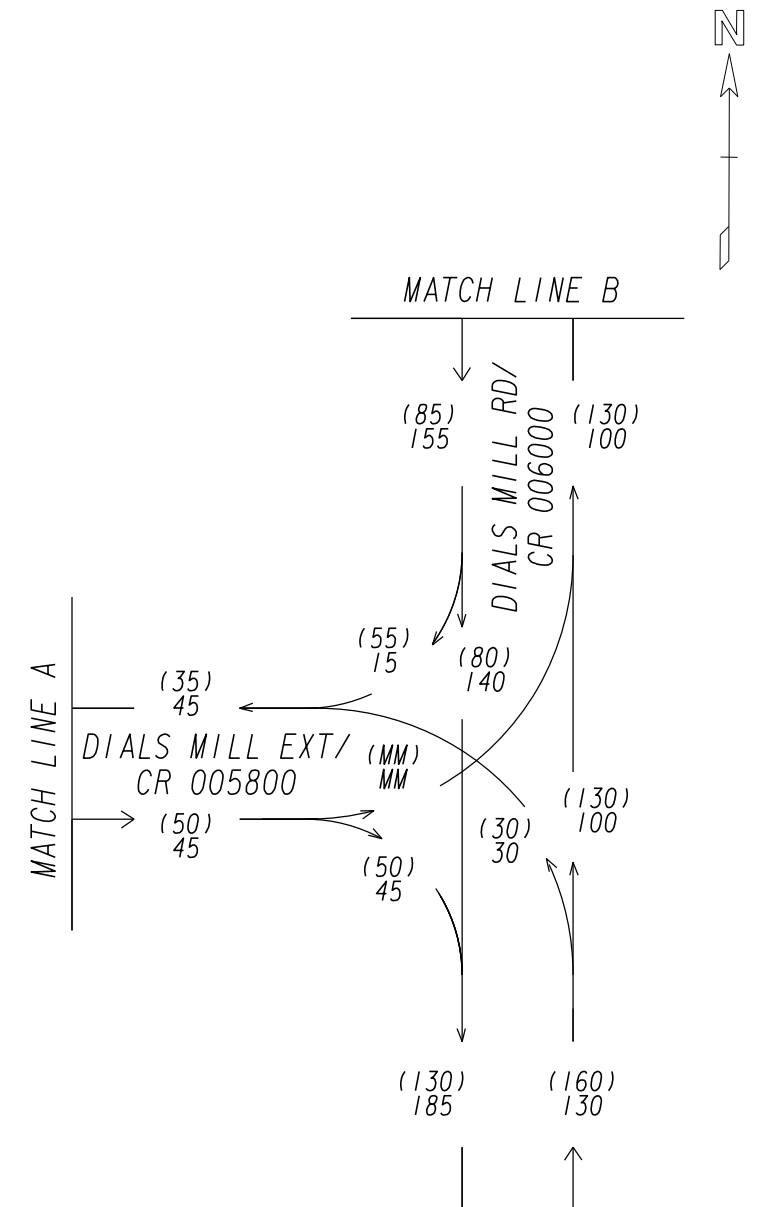


SR 316  
AM (PM) T= 15.5% (15%)  
AM (PM) SU= 14.5% (14.5%)  
AM (PM) COMB= 1% (0.5%)

[illegible]

### TRAFFIC DIAGRAM

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VERIFIED: DRF	DATE:	



<b>TRAFFIC DIAGRAM</b>			
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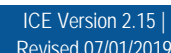
## 6. Capacity Analysis Summary

# Capacity Analysis Summary

2047 PREFERED ALTERNATIVE: SR 316 INTERCHANGE WITH DIALS MILL RD/EXT. LOS TWSC		
INTERSECTION	AM	PM
NORTH RAMP	A	A
SOUTH RAMP	A	A

2047 ALTERNATIVES 2&3: SR 316 INTERCHANGE WITH DIALS MILL RD/EXT. LOS ROUNDAABOUT		
INTERSECTION	AM	PM
NORTH RAMP	A	A
SOUTH RAMP	A	A





**Documentation:** A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

GDOT PI #	0007685 0013763	<p><b>Note:</b> Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2</p> <p>1. Does alternative address the project need in a balanced manner and in scale with the project?</p> <p>2. Does alternative improve safety performance in terms of reducing severe crashes?</p> <p>3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?</p> <p>4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?</p> <p>5. Does alternative appear feasible given the site characteristics, constraints &amp; location context?</p> <p>6. Does alternative appear feasible with respect to other project factors?</p> <p>7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?</p> <p><b>Screening Decision Justification:</b></p>							
Project Location:	Dials Mill Rd. @ North Ramp								
Existing Control:	Conventional (Minor Stop)								
Prepared by:	GDOT								
Date:	1/4/2021								
<p>Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column</p> <p><b>Intersection Alternative</b> (see "Intersections" tab for detailed description of intersection/interchange type)</p>									
Unsignalized Intersections	Conventional (Minor Stop)	Yes	No	No	Yes	Yes	Yes	Yes	Existing configuration
	Conventional (All-Way Stop)	Yes	Yes	No	No	Yes	No	No	lower price, interrupts traffic on mainline
	Mini Roundabout	Yes	Yes	No	No	Yes	Yes	No	safer, low intersection delay, high cost, speed too high
	Single Lane Roundabout	Yes	Yes	No	No	Yes	Yes	Yes	safer, low intersection delay, high cost. Potential alternative to evaluate
	Multilane Roundabout	Yes	Yes	No	No	Yes	Yes	Yes	safer, low intersection delay, high cost. Potential alternative to evaluate
	RCUT (stop control)	No	Yes	No	No	No	No	No	moderate cost, restricts left turning movements from the ramp
	RIRO w/down stream U-Turn	No	Yes	No	No	No	No	No	moderate cost, interrupts traffic on mainline
	High-T (unsignalized)	No	No	No	No	No	No	No	moderate cost, interrupts traffic on mainline
	Offset-T Intersections	No	No	No	No	No	No	No	not feasible with project area
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	not feasible with project area
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	not feasible with project area
	No LT Lane Improvements	No	No	No	No	No	No	No	not feasible with project area
	No RT Lane Improvements	No	No	No	No	No	No	No	not feasible with project area
	Other unsignalized (provide description):	No	No	No	No	No	No	No	not feasible with project area
Signalized Intersections	Traffic Signal	No	No	Yes	No	Yes	No	No	does not meet warrants
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	does not meet warrants
	RCUT (signalized)	No	No	No	No	No	No	No	does not meet warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	does not meet warrants
	Continuous Green-T	No	No	No	No	No	No	No	does not meet warrants
	Jughandle	No	No	No	No	No	No	No	does not meet warrants
	Quadrant Roadway	No	No	No	No	No	No	No	does not meet warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	does not meet warrants
	Diverging Diamond	No	No	No	No	No	No	No	does not meet warrants
	Single Point Interchange	No	No	No	No	No	No	No	does not meet warrants
	No LT Lane Improvements	No	No	No	No	No	No	No	does not meet warrants
	No RT Lane Improvements	No	No	No	No	No	No	No	does not meet warrants
	Other Signalized (provide description):	No	No	No	No	No	No	No	does not meet warrants

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

## GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.15 | Revised 07/01/2019

GDOT PI # (or N/A) 0007685 0013763  
 County: Oconee  
 Project Location: Dials Mill Rd. @ North Ramp  
 Existing Intersection Control: Conventional (Minor Stop)

GDOT District: 1 - Gainesville  
 Area Type: Rural

Date: 1/4/2021  
 Agency/Firm: GDOT  
 Analyst: Garrett Stinson

Type of Analysis: **Safety Funded Project**

### Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	HCS 2010	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2027 Opening Yr No-Build Peak Hr Intersection Delay	2.0 sec	2.0 sec
2027 Opening Yr No-Build Peak Hr Intersection V/C	0.06	0.05
2047 Design Yr No-Build Peak Hr Intersection Delay	1.9 sec	1.9 sec
2047 Design Yr No-Build Peak Hr Intersection V/C	0.07	0.07

Complete Streets Warrants Met?

- ☐ PEDESTRIANS  
☐ BICYCLES  
☐ TRANSIT

Crash Type	Crash Data: Enter most recent 5 years of crash data			
	Crash Severity			
	PDO	Injury Crash*	Fatal Crash*	
Angle	6	0	0	100%
Head-On	0	0	0	0%
Rear End	0	0	0	0%
Sideswipe - same	0	0	0	0%
Sideswipe - opposite	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0%
<b>TOTALS:</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>

\* Number of crashes resulting in injuries / fatalities, not number of persons

### Alternatives Analysis:

Proposed Control Type/Improvement:

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Conventional (Minor Stop)	Single Lane Roundabout	Multilane Roundabout	N/A	N/A

### Project Cost: (From CostEst Worksheet)

	Additional description here	Additional description here	Additional description here		
Construction Cost	\$70,000	\$1,498,000	\$2,426,000		
ROW Cost	\$0	\$271,766	\$357,788		
Environmental Cost	\$0	\$0	\$0		
Reimbursable Utility Cost	\$0	\$0	\$0		
Design & Contingency Cost	\$17,500	\$0	\$0		
Cost Adjustment (justification req'd)					
<b>Total Cost</b>	<b>\$87,500</b>	<b>\$1,769,766</b>	<b>\$2,783,788</b>		

### Traffic Operations:

Traffic Analysis Software Used	HCS 2010		GDOT RND Tool 4.1		GDOT RND Tool 4.1			
Analysis Period	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr		
2047 Design Yr Build Intersection Delay	2.0 sec	1.9 sec	4.1 sec	4.0 sec	8.4 sec	8.7 sec		
2047 Design Yr Build Intersection V/C	0.06	0.06	0.18	0.15	0.52	0.52		

### Safety Analysis:

Predefined CRF: PDO	0%	71%	32%		
Predefined CRF: Fatal/Inj	0%	87%	71%		
Predefined CRF Source:	N/A	FHWA Clearinghouse #s 233 / 230	FHWA Clearinghouse #s 236 / 237		
User Defined CRF: PDO	0%	0%	0%		
User Defined CRF: Fatal/Inj	0%	0%	0%		
User Defined CRF Source (write in if applicable):	0%	0%	0%		

### Environmental Impacts:<sup>1</sup>

Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	Minimal	Minimal		
Wetland	None	None	None		

Note: If environmental impact is significant (**RED**), provide justification impact won't jeopardize project delivery using "Env" worksheet

<sup>1</sup> Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report

### Stakeholder Posture:

Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Neutral	Strong	Supportive		

<b>Final ICE Stage 2 Score:</b>	<b>6.1</b>	<b>5.0</b>	<b>3.2</b>		
Rank of Control Type Alternatives:	<b>1</b>	<b>2</b>	<b>3</b>		

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary):

Major Street Direction: North/South

ing Conditions	NB Dials Mill Rd.			SB Dials Mill Rd.			EB North Ramp			WB North Ramp		
Movement	Left Turn	Thru	Right Turn	Left Turn	Thru	Right Turn	Left Turn	Thru	Right Turn	Left Turn	Thru	Right Turn
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Lane Widths*	12'			12'			12'			12'		
Bay Length**												
Median Width	0'			0'			0'			0'		
Right-of-Way	0'						0'					

<b>2: Proposed Conditions</b>	Conventional (Minor Stop)	Single Lane Roundabout	Multilane Roundabout	N/A	N/A
Proposed Pavement Type	F.D. Asphalt	F.D. Asphalt	F.D. Asphalt	F.D. Asphalt	F.D. Asphalt
Reimbursable Utility:	Minimal	Moderate	Minimal	Minimal	Minimal
# of Driveway(s) Impacted	0	0	0	0	0
Modify/Replace Traffic Signal	0	0	0	0	0
Lighting Poles (ea)	0	0	0	0	0
Flashing Beacons (ea)	0	0	0	0	0
RFB/PHB Ped Crossings (ea)	0	0	0	0	0
New/Replace Sidewalks (LF)	0'	0'	0'	0'	0'
New/Replace Cross Drains (LF)	500'	500'	500'	0'	0'
New/Replace Guardrail (LF)	1000'	1000'	1000'	0'	0'
New Retaining Wall (LF)	0'	0'	0'	0'	0'
Edge/New/Widen/Replace (sqft)	0	0	0	0	0
Full ROW/Easements/DEMOLITION	\$0	\$0	\$0	\$0	\$0

Topography:	Rolling
Traffic Mgmt Plan:	Maintain Traffic
Project Size:	Single Intersection

Signal Poles	Mast Arm
Design Vehicle	WB-67
Existing Interchange?	No

Grading Complete:	20%
Reimbursable Utility:	2%
Traffic Control:	20%
Project Size:	0%
Prelim Engineering:	15%
Project Contingency:	20%

Inscribed DIA - Mini	80
Inscribed DIA - Single	140
Inscribed DIA - Multi	200
Circulating Lane Width	18

Prevalent ROW Type:	Mixed (Average)
ROW Cost/Acre:	\$76,125
ROW Multiplier:	1.4

Pay Item	Per Ln Mi		Conventional (Minor Stop)		Single Lane Roundabout		Multilane Roundabout		N/A		N/A	
	Unit Cost	Unit Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
New Construction (Base & Pave)	\$500K/LM	\$9.47/sqft	0	\$0	34,624	\$442,639	70,344	\$899,286	N/A	N/A		
Roadway Mill and Overlay	\$64K/LM	\$1.21/sqft	0	\$0	0	\$0	0	\$0	N/A	N/A		
Urban C&G/Drainage - both sides	441-6720	\$19.08/LF	0	\$0	0	\$0	0	\$0	N/A	N/A		
Rural Typ Drainage - both sides	\$150K/LM	\$2.84/LF	0	\$0	2,767	\$10,611	3,431	\$13,157	N/A	N/A		
Concrete Island (sqyd)	n/a	\$51.58/syd	0	\$0	480	\$33,424	600	\$41,780	N/A	N/A		
Median Landscaping	\$100K/LM	\$1.89/LF	0	\$0	3,000	\$7,670	3,600	\$9,205	N/A	N/A		
Typical Driveways Impacted (ea)	n/a	\$7,500 ea	0	\$0	0	\$0	0	\$0	N/A	N/A		
Typical E&S Control Temp/Perm	\$150K/LM	\$34.09/LF	0	\$0	1,000	\$46,023	1,200	\$55,227	N/A	N/A		
Roundabout Truck Apron (sqft)	n/a	\$10.25/sqft	0	\$0	2,953	\$40,866	4,273	\$59,126	N/A	N/A		
Signing & Marking	\$0	\$22.73/LF	0	\$0	1,000	\$30,686	1,200	\$36,823	N/A	N/A		
Flashing Beacon (ea)	n/a	\$20,000 ea	0	\$0	0	\$0	0	\$0	N/A	N/A		
New Traffic Signal (Mast Arms)	674-1000	\$182,575ea	0	\$0	0	\$0	0	\$0	N/A	N/A		
Lighting (per pole)	n/a	\$5,607 ea	0	\$0	0	\$0	0	\$0	N/A	N/A		
Signalized Ped Crossings (ea)	n/a	\$19,637 ea	0	\$0	0	\$0	0	\$0	N/A	N/A		
6' Sidewalk (LF)	n/a	\$49.23/LF	0	\$0	0	\$0	0	\$0	N/A	N/A		
New/replace cross drains (LF)	n/a	\$41.31/LF	0	\$0	500	\$27,884	500	\$27,884	N/A	N/A		
Typical Guardrail (LF)	n/a	\$65.56/LF	0	\$0	1000	\$88,506	1000	\$88,506	N/A	N/A		
Retaining Wall (LF)	n/a	\$808.52/LF	0	\$0	0	\$0	0	\$0	N/A	N/A		
Bridge widen/replace (SF)	n/a	\$210/sqft	0	\$0	0	\$0	0	\$0	N/A	N/A		
Env Costs (from Stage 2 impacts)	n/a	n/a	0	\$0	0	\$13,500	0	\$13,500	N/A	N/A		
Grading Complete - 20%	n/a	n/a		\$0		\$300,433		\$504,020	N/A	N/A		
Traffic Control - 20%	n/a	n/a		\$0		\$200,288		\$336,013	N/A	N/A		
Reimbursable Utility	n/a	n/a		\$0		\$36,415		\$24,620	N/A	N/A		
Preliminary Engineering - 15%	n/a	n/a		\$0		\$150,216		\$252,010	N/A	N/A		
Contingency - 20%	n/a	n/a		\$0		\$200,288		\$336,013	N/A	N/A		
ROW Cost/Acre: Mixed (Average)	n/a	\$76,125ac		\$0		\$90,413		\$160,708	N/A	N/A		
Add'l ROW / Displacement / Demo	n/a	n/a		\$0		\$0		\$0	N/A	N/A		
ROW Multiplier - 1.4	n/a	n/a		\$0		\$36,165		\$64,283	N/A	N/A		
Project Scale Reduction - 0.0%	n/a	n/a		\$0		\$0		\$0	N/A	N/A		
<b>Grand Total Costs</b>				<b>\$0</b>		<b>\$1,756,000</b>		<b>\$2,922,000</b>	N/A	N/A		

[illegible]



GDOT PI # (or N/A): 0007685 001 Request By:

County: Oconee GDOT District: 1 - Gainesville

Major (State) Road: Dials Mill Rd. Speed Limit: 45 mph

Minor (Crossing) ST: South Ramp Speed Limit: 45 mph

Major ST Direction: North/South Area Type: Rural

Intersection Control: Conventional (Minor Stop)

Prepared By: GDOT Analyst: Garrett Stinson

Date: 1/4/2021 Project ID:

Project Purpose:

2020	Existing Data Year
2027	Project Opening Year
2047	Project Design Year

## 2020 Existing Year Volumes

Existing Data Year

project Opening Year

project Design Year

Annual Growth Rate: 0.0%

K Factor\*: 0%

EB South Ramp

2020 Intersection Daily Entering Volume (est): #DIV/O!

WB South Ramp

Hour % Trucks

WB

NB

SB

7%

7%

7%

Legend:

000 = AM Peak Approach Vol

(000) = PM Peak Approach Vol

[000] = ADT Volume (Estimate)

Peak Hour % Trucks			
EB	WB	NB	SB
7%	7%	7%	7%

Annual Growth Rate: 0.0%  
K Factor\*: 0%

Legend:  
000 = AM Peak Approach Vol  
(000) = PM Peak Approach Vol  
[000] = ADT Volume (Estimate)  
#DIV/O!

## 2027 Opening Year Volumes

				#DIV/0!							
								#DIV/0!			

## 2047 Design Year Volumes

		#DIV/O!						
		(0)	(0)	(45)	(45)	SB Dials Mill		
		0	0	65	60	SB Rd.		
EB South Ramp		Peds	↶	↷	↶	Peds	0	(0)
iO/DIV/#	(55)	110	↶	2047 Intersection Daily Entering Volume (est): #DIV/O!		↶	0	(0)
	(0)	0	↷			↶	0	(0)
	(45)	50	↶			↶	0	(0)
	(0)	0	Peds	↶	↶	↶	Peds	WB South Ramp
		NB Dials Mill	Rd.	0	40	50	0	
				(0)	(45)	(45)	(0)	
				#DIV/O!				

**Introduction:** In 2005, SAFETEA-LU established the Highway Safety Improvement Program (HSIP) and mandated that each state prepare a Strategic Highway Safety Plan (SHSP) to prioritize safety funding investments. Intersections quickly became a common component of most states' SHSP emphasis areas and HSIP project lists, including Georgia's SHSP. Intersection Control Evaluation (ICE) policies and procedures represent a traceable and transparent procedure to streamline the evaluation of intersection control alternatives, and further leverage safety advancements for intersection improvements beyond just the safety program. Approximately one-third of all traffic fatalities and roughly seventy five percent of all traffic crashes in Georgia occur at or adjacent to intersections. Accordingly, the Georgia SHSP includes an emphasis on enhancing intersection safety to advance the *Toward Zero Deaths* vision embraced by the Georgia Governor's Office of Highway Safety (GOHS). This ICE tool was developed to support the ICE policy, developed and adopted to help ensure that intersection investments across the entire Georgia highway system are selected, prioritized and implemented with defensible benefits for safety towards those ends.

**Tool Goal:** The goal of this ICE tool is to provide a simplified and consistent way of importing traffic, safety, cost, environmental impact and stakeholder posture data to assess and quantify intersection control improvement benefits. The tool supports the ICE policy and procedures to provide traceability, transparency, consistency and accountability when identifying and selecting an intersection control solution that both meets project purpose and reflects overall best value in terms of specific performance-based criteria.

**Requirements:** An ICE is required for any intersection improvement (e.g. new or modified intersection, widening/reconstruction or corridor project, or work accomplished through a driveway or encroachment permit that affects an intersection) where: **1)** the intersection includes at least one roadway designated as a State Route (State Highway System) or as part of the National Highway System; or **2)** the intersection will be designed or constructed using State or Federal funding. In certain circumstances where an ICE would otherwise be required, the requirement may be waived based on appropriate evidence presented with a written request. (See the "Waiver" tab to review criteria that may make a project waiver eligible and for instructions to submit a waiver request to the Department). An ICE is not required when the proposed work does not include any changes to the intersection design, involves only routine traffic signal timing and equipment maintenance, or for driveway permits where the driveway is not a new leg to an already existing intersection on either 1) a divided, multi-lane highway with a closed median and only right-in/right-out access or 2) an undivided roadway where the development is not required to construct left and/or right turn lanes (as per the Driveway Manual and District Traffic Engineer).

**Two-Stage Process:** A complete ICE process consists of two (2) distinct stages, and it is expected that the respective level of effort for completing both stages of ICE will correspond to the magnitude and complexity of the intersection. Prior to starting an ICE, the District Traffic Engineer and/or State Traffic Engineer should be consulted for advice on an appropriate level of effort. The Stage 1 and Stage 2 ICE forms are designed minimize required data inputs using drop-down menu choices and limiting text entry. All fields shaded grey include drop down menu choices and all fields shaded blue require data entry. All other cells in the worksheet are locked.

**Stage 1: Screening Decision Record** Stage 1 should be conducted early in the project development process and is intended to inform which alternatives are worthy of further evaluation in Stage 2. Stage 1 serves as a screening effort meant to *eliminate* non-competitive options and identify which alternatives merit further considerations based on their practical feasibility. Users should use good engineering judgement in responding to the seven policy questions by selecting "Yes" or "No" in the drop-down boxes. Alternatives should not be summarily eliminated without due consideration, and reasons for eliminating or advancing an alternative should be documented in the "Screening Decision Justification" column.

**Stage 2: Alternative Selection Decision Record** Stage 2 involves a more detailed and familiar evaluation of the alternatives identified in Stage 1 in order to support the selection of a preferred alternative that may be advanced to detailed design. Stage 2 data entry may require the use of external analysis tools to determine costs, operations and/or safety data that, combined with environmental and stakeholder posture data, form the basis of the ICE evaluation. A separate "CostEst" worksheet tab helps users develop pre-planning-level cost estimates for each Stage 2 alternative evaluated, and a separate Users Guide has been prepared to give guidance on Stage 1 and Stage 2 data entry. Once all data is entered, each alternative is scored and ranked, with the results reported at the bottom of the Stage 2 worksheet to inform on the best of the intersection controls evaluated for project recommendation.

**Documentation:** A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.



GDOT PI #		0007685 0013763		<p><b>Note:</b> Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2</p> <p>1. Does alternative address the project need in a balanced manner and in scale with the project?</p> <p>2. Does alternative improve safety performance in terms of reducing severe crashes?</p> <p>3. Does alternative incorporate safety performance in operations for pedestrians and/or bicyclists?</p> <p>4. Does alternative improve (or preserve) convenience characteristics (congestion, delay, reliability, etc.)?</p> <p>5. Does alternative appear feasible given the site respect to other project factors?</p> <p>6. Does alternative appear feasible with respect to other project factors?</p> <p>7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?</p>						
Project Location:		Dials Mill Rd. @ South Ramp								
Existing Control:		Conventional (Minor Stop)								
Prepared by:		GDOT								
Date:		1/4/2021		<p>Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column</p>						
<p><b>Intersection Alternative</b> (see "Intersections" tab for detailed description of intersection/interchange type)</p>										
				<p><b>Screening Decision Justification:</b></p>						
Unsignalized Intersections	Conventional (Minor Stop)		Yes	No	No	Yes	Yes	Yes	Yes	Existing configuration
	Conventional (All-Way Stop)		Yes	Yes	No	No	Yes	No	No	lower price, interrupts traffic on mainline
	Mini Roundabout		Yes	Yes	No	No	Yes	Yes	No	safer, low intersection delay, high cost, speed too high
	Single Lane Roundabout		Yes	Yes	No	No	Yes	Yes	Yes	safer, low intersection delay, high cost. Potential alternative to evaluate
	Multilane Roundabout		Yes	Yes	No	No	Yes	Yes	Yes	safer, low intersection delay, high cost. Potential alternative to evaluate
	RCUT (stop control)		No	Yes	No	No	No	No	No	moderate cost, restricts left turning movements from the ramp
	RIRO w/down stream U-Turn		No	Yes	No	No	No	No	No	moderate cost, interrupts traffic on mainline
	High-T (unsignalized)		No	No	No	No	No	No	No	moderate cost, interrupts traffic on mainline
	Offset-T Intersections		No	No	No	No	No	No	No	not feasible with project area
	Diamond Interch (Stop Control)		No	No	No	No	No	No	No	not feasible with project area
	Diamond Interch (RAB Control)		No	No	No	No	No	No	No	not feasible with project area
	No LT Lane Improvements		No	No	No	No	No	No	No	not feasible with project area
	No RT Lane Improvements		No	No	No	No	No	No	No	not feasible with project area
	Other unsignalized (provide description):		No	No	No	No	No	No	No	not feasible with project area
Signalized Intersections	Traffic Signal		No	No	Yes	No	Yes	No	No	does not meet warrants
	Median U-Turn (Indirect Left)		No	No	No	No	No	No	No	does not meet warrants
	RCUT (signalized)		No	No	No	No	No	No	No	does not meet warrants
	Displaced Left Turn (CFI)		No	No	No	No	No	No	No	does not meet warrants
	Continuous Green-T		No	No	No	No	No	No	No	does not meet warrants
	Jughandle		No	No	No	No	No	No	No	does not meet warrants
	Quadrant Roadway		No	No	No	No	No	No	No	does not meet warrants
	Diamond Interch (Signal Control)		No	No	No	No	No	No	No	does not meet warrants
	Diverging Diamond		No	No	No	No	No	No	No	does not meet warrants
	Single Point Interchange		No	No	No	No	No	No	No	does not meet warrants
	No LT Lane Improvements		No	No	No	No	No	No	No	does not meet warrants
	No RT Lane Improvements		No	No	No	No	No	No	No	does not meet warrants
	Other Signalized (provide description):		No	No	No	No	No	No	No	does not meet warrants

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

## GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.15 | Revised 07/01/2019

GDOT PI # (or N/A) 0007685 0013763

GDOT District: 1 - Gainesville

Date: 1/4/2021

County: Oconee

Area Type: Rural

Agency/Firm: GDOT

Project Location: Dials Mill Rd. @ South Ramp

Analyst: Garrett Stinson

Existing Intersection Control: Conventional (Minor Stop)

Type of Analysis: Safety Funded Project

### Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	HCS 2010	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2027 Opening Yr No-Build Peak Hr Intersection Delay	2.0 sec	2.0 sec
2027 Opening Yr No-Build Peak Hr Intersection V/C	0.06	0.05
2047 Design Yr No-Build Peak Hr Intersection Delay	1.9 sec	1.9 sec
2047 Design Yr No-Build Peak Hr Intersection V/C	0.07	0.07

Complete Streets Warrants Met?

- ☐ PEDESTRIANS  
☐ BICYCLES  
☐ TRANSIT

Crash Type	Crash Severity			
	PDO	Injury Crash*	Fatal Crash*	
Angle	6	0	0	100%
Head-On	0	0	0	0%
Rear End	0	0	0	0%
Sideswipe - same	0	0	0	0%
Sideswipe - opposite	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0%
TOTALS:	6	0	0	6

\* Number of crashes resulting in injuries / fatalities, not number of persons

### Alternatives Analysis:

Proposed Control Type/Improvement:

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Conventional (Minor Stop)	Single Lane Roundabout	Multilane Roundabout	N/A	N/A

### Project Cost: (From CostEst Worksheet)

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Construction Cost	\$70,000	\$1,498,000	\$2,426,000		
ROW Cost	\$0	\$271,766	\$357,788		
Environmental Cost	\$0	\$0	\$0		
Reimbursable Utility Cost	\$0	\$0	\$0		
Design & Contingency Cost	\$17,500	\$0	\$0		
Cost Adjustment (justification req'd)					
Total Cost	\$87,500	\$1,769,766	\$2,783,788		

### Traffic Operations:

	HCS 2010		GDOT RND Tool 4.1		GDOT RND Tool 4.1	
Traffic Analysis Software Used	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr
Analysis Period	2.0 sec	2.0 sec	4.0 sec	4.9 sec	9.1 sec	9.0 sec
2047 Design Yr Build Intersection Delay	0.06	0.05	0.15	0.18	0.55	0.54
2047 Design Yr Build Intersection V/C						

### Safety Analysis:

Predefined CRF: PDO	0%	71%	32%		
Predefined CRF: Fatal/Inj	0%	87%	71%		
Predefined CRF Source:	N/A	FHWA Clearinghouse #s 233 / 230	FHWA Clearinghouse #s 236 / 237		
User Defined CRF: PDO	0%	0%	0%		
User Defined CRF: Fatal/Inj	0%	0%	0%		
User Defined CRF Source (write in if applicable):	0%	0%	0%		

### Environmental Impacts:<sup>1</sup>

Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	Minimal	Minimal		
Wetland	None	None	None		

Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet

<sup>1</sup> Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report

### Stakeholder Posture:

Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Neutral	Strong	Supportive		

<b>Final ICE Stage 2 Score:</b>	<b>6.1</b>	<b>5.0</b>	<b>3.1</b>		
Rank of Control Type Alternatives:	1	2	3		

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary):



## HCS 2010 Two Way Stop Intersections Release 6.80

## TWO-WAY STOP CONTROL (TWSC) Analysis

File Name: 2047 AM RD & N RAMP  
 Analyst: Garrett Stinson  
 Agency/Co.: GDOT Roadway Design  
 Date Performed: 12/9/2020  
 Time Analyzed: 2047am  
 Jurisdiction: Oconee D1  
 Analysis Year: 2047  
 Project Description: P.I. 0007685  
 Units: U.S. Customary  
 Intersection Name: Dials Mill RD. & N Ramp  
 Major Street Direction: North-South  
 East/West Street Name: A North Ramp  
 North/South Street Name: Dials Mill RD  
 Analysis Time Period (hrs): 0.25

## Vehicle Volumes and Adjustments

Major Street: Approach Movement	1U U	NorthBound 1 L	2 T	3 R		4U U	SouthBound 4 L	5 T	6 R
Volume		40	115					150	40
Peak Hour Factor, PHF					0.88				
Hourly Flow Rate, HFR		45	131					170	45
Percent Heavy Vehicles		3							
Number of Lanes	0	0	1	0		0	0	1	0
Lane Configuration		LT							TR
Median Type					Undivided				
Median Storage									
RT channelized?				No					No
Left-Turn Lane Storage									
Upstream Signal?					Not Present				

Minor street: Approach Movement	WestBound 7 L	8 T	9 R		EastBound 10 L	11 T	12 R
Volume	20	0	15				
Peak Hour Factor, PHF				0.88			
Hourly Flow Rate, HFR	23	0	17				
Percent Heavy Vehicles	3	3	3				
Number of Lanes	0	1	0		0	0	0
Lane Configuration		LTR					
RT channelized?			No				No
Flared Approach/Storage	No	/			No	/	
Percent Grade		0					

## Pedestrian Volumes and Adjustments

Approach Movement	NB 13	SB 14	WB 15	EB 16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)				
Walking Speed (ft/sec)				
Pedestrian Blockage Factor, f(pb)				

## Delay, Queue Length, and Level of Service

Approach Movement Lane Config.	NB 1 LT	SB 4	7	WestBound 8 LTR	9	10	EastBound 11	12
Flow Rate	45			40				
Lane Capacity	1348			697				
v/c	0.03			0.06				
95% Queue Leng.	0.1			0.2				
Control Delay	7.8			10.5				
LOS	A			B				
Approach Delay	2.2			10.5				
Approach LOS				B				
Intersct. Delay	1.9							

## Step 1: MOVEMENT PRIORITIES

Major Street: Approach Priority Movement	1U U	NorthBound 1 L	2 T	3 R		4U U	SouthBound 4 L	5 T	6 R
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Minor Street:												
Approach			WestBound					EastBound				
Priority			7	8	9		10	11	12			
Movement			L	T	R		L	T	R			
Step 2: MOVEMENT DEMAND VOLUMES AND FLOW RATES												
Major Street:												
Approach			NorthBound					SouthBound				
Movement			1U	2	3		4U	5	6			
			U	L	T		U	L	T	R		
Volume, V(x)			40	115				150	40			
Flow Rate, v(x)			45	131				170	45			
Minor Street:												
Approach			WestBound					EastBound				
Movement			7	8	9		10	11	12			
			L	T	R		L	T	R			
Volume, V(x)			20	0	15							
Flow Rate, v(x)			23	0	17							
Step 3: CONFLICTING FLOW RATES												
Major Street:												
Approach			NorthBound					SouthBound				
Movement			1U	2	3		4U	5	6			
			U	L	T		U	L	T	R		
Flow Rate, v(x)			45	131				170	45			
Conflicting Flow, v(c,x)			215									
Minor Street:												
Approach			WestBound					EastBound				
Movement			7	8	9		10	11	12			
			L	T	R		L	T	R			
Flow Rate, v(x)			23	0	17							
Conflicting Flow, v(c,x)			414	436	131							
Step 4: CRITICAL HEADWAYS and FOLLOW-UP HEADWAYS												
CRITICAL HEADWAYS												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
t(c,base)												
Single Stage				4.1			7.1	6.5	6.2			
Stage I												
Stage II												
t(c,HV)				1.0			1.0	1.0	1.0			
P(HV)				0.03			0.03	0.03	0.03			
t(c,G)				0.0			0.2	0.2	0.1			
G				0			0	0	0			
t(3,LT)				0.0			0.7	0.0	0.0			
t(c)												
Single stage				4.13			6.43	6.53	6.23			
Stage I												
Stage II												
FOLLOW-UP HEADWAYS												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
t(f,base)				2.2			3.5	4.0	3.3			
t(f,HV)				0.9			0.9	0.9	0.9			
P(HV)				0.03			0.03	0.03	0.03			
t(f)				2.23			3.53	4.03	3.33			
Step 5: POTENTIAL CAPACITIES												
NO UPSTREAM SIGNAL EFFECTS PRESENT												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
v(c,x)				215			414	436	131			
t(c,x)				4.13			6.43	6.53	6.23			
t(f,x)				2.23			3.53	4.03	3.33			
c(p,x)				1348			592	512	915			



Steps 6 - 9: MOVEMENT CAPACITIES

Pedestrian Impedance				
Approach	NB	SB	WB	EB
Movement	13	14	15	16
Pedestrian Flow Rate, $v(x)$	0	0	0	0
Lane Width, $w$				
Walking Speed, $S(p)$				
Pedestrian Blockage Factor, $f(pb)$				
Major-Street Left-Turn Movement		1	4	
Conflicting Flow, $v(c,x)$		215		
Potential Capacity, $c(p,x)$		1348		
Pedestrian Impedance Factor, $p(p,x)$		1.000		
Movement Capacity, $c(m,x)$		1348		
Probability of Queue-free State, $p(0,j)$		0.967		
Major L-Shared Prob. Q-free St., $p^*(0,j)$		0.964		
Minor-Street Right-Turn Movement		9	12	
Conflicting Flow, $v(c,x)$		131		
Potential Capacity, $c(p,x)$		915		
Pedestrian Impedance Factor, $p(p,x)$		1.000		
Movement Capacity, $c(m,x)$		915		
Probability of Queue-free State, $p(0,j)$		0.981		
Major-Street U-turn Movement		1U	4U	
Conflicting Flow, $v(c,x)$				
Potential Capacity, $c(p,x)$				
Capacity Adjustment Factor, $f(x)$				
Movement Capacity, $c(m,x)$				
Shared L/U Capacity, $c(SH)$				
Probability of Queue-free State, $p(0,j)$				
Minor-Street Through Movement		8	11	
Conflicting Flow, $v(c,x)$		436		
Potential Capacity, $c(p,x)$		512		
Pedestrian Impedance Factor, $p(p,x)$		1.000		
Capacity Adjustment Factor, $f(x)$		0.964		
Movement Capacity, $c(m,x)$		494		
Probability of Queue-free State, $p(0,j)$		1.000		
Minor-Street Left-Turn Movement		7	10	
Conflicting Flow, $v(c,x)$		414		
Potential Capacity, $c(p,x)$		592		
Pedestrian Impedance Factor, $p(p,x)$		1.000		
Major L, Minor T Adj. Imp. Factor, $p''$				
Major L, Minor T Impedance Factor, $p'$				
Capacity Adjustment Factor, $f(p,l)$		1.000		
Movement Capacity, $c(m,x)$		592		

Step 11: CONTROL DELAY

CONTROL DELAY TO RANK 2 THROUGH 4 MOVEMENTS											
Approach	NB			SB			WestBound		EastBound		
Movement	1U	1	4U	4	7	8	9	10	11	12	
	U	L	U	L	L	T	R	L	T	R	
Flow Rate		45			23	0	17				
Movement Cap.		1348			592	494	915				
Lane Config.		LT				LTR					
Shared Cap.						697					
Control Delay		7.8				10.5					

CONTROL DELAY TO RANK 1 MOVEMENTS

Approach	NB	SB
Movement	2	5
Number of Major Street Through Lanes, $N$	1	1
Proportion of Rank 1 vehicles not blocked, $p^*(0,j)$	0.964	
Delay to Major Left-turning Vehicles, $d(MLT)$	7.8	7.6
Major Street Through Vehicles in Shared Lane, $vi1$		23
Major Street Turning Vehicles in Shared Lane, $vi2$	45	57
Saturation Flow Rate for Major Street Through, $si1$	1800	1800
Saturation Flow Rate for Major Street Right-Turn, $si2$		1500
Delay to Rank 1 Vehicles, $d(Rank1)$	0.3	0.3

Steps 12 - 13: APPROACH/INTERSECTION CONTROL DELAY and 95% QUEUE LENGTHS														
Approach	1U	NB	1	4U	SB	4	7	WestBound	8	9	10	EastBound	11	12
Movement			LT						LTR					
Lane Config.														
Flow Rate			45						40					
Lane Capacity			1348						697					
v/c			0.03						0.06					
95% Queue Leng.			0.1						0.2					
Control Delay			7.8						10.5					
LOS			A						B					
Approach Delay			2.2						10.5					
Approach LOS									B					
Intersct. Delay			1.9											

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## HCS 2010 Two Way Stop Intersections Release 6.80

## TWO-WAY STOP CONTROL (TWSC) Analysis

File Name: 2047 AM RD & S RAMP  
 Analyst: Garrett Stinson  
 Agency/Co.: GDOT Roadway Design  
 Date Performed: 12/9/2020  
 Time Analyzed: 2047am  
 Jurisdiction: Oconee D1  
 Analysis Year: 2047  
 Project Description: P.I. 0007685  
 Units: U.S. Customary  
 Intersection Name: Dials Mill RD. & S Ramp  
 Major Street Direction: North-South  
 East/West Street Name: A South Ramp  
 North/South Street Name: Dials Mill RD  
 Analysis Time Period (hrs): 0.25

## Vehicle Volumes and Adjustments

Major Street:									
Approach	NorthBound				SouthBound				
Movement	1U	1	2	3	4U	4	5	6	
	U	L	T	R	U	L	T	R	
Volume			115	25		25	150		
Peak Hour Factor, PHF					0.88				
Hourly Flow Rate, HFR			131	28		28	170		
Percent Heavy Vehicles						3			
Number of Lanes	0	0	1	0	0	0	1	0	
Lane Configuration				TR		LT			
Median Type					Undivided				
Median Storage									
RT channelized?				No				No	
Left-Turn Lane Storage									
Upstream Signal?					Not Present				
Minor street:									
Approach	WestBound				EastBound				
Movement	7	8	9		10	11	12		
	L	T	R		L	T	R		
Volume					25	0	20		
Peak Hour Factor, PHF					0.88				
Hourly Flow Rate, HFR					28	0	23		
Percent Heavy Vehicles					1	3	1		
Number of Lanes	0	0	0		0	1	0		
Lane Configuration						LTR			
RT channelized?			No				No		
Flared Approach/Storage	No	/			No	/			
Percent Grade						0			

## Pedestrian Volumes and Adjustments

Approach								
Movement	NB		SB		WB		EB	
	13		14		15		16	
Flow (ped/hr)	0		0		0		0	
Lane Width (ft)								
Walking Speed (ft/sec)								
Pedestrian Blockage Factor, f(pb)								

## Delay, Queue Length, and Level of Service

Approach	NB		SB		WestBound		EastBound	
Movement	1U	1	4U	4	7	8	9	10
Lane Config.				LT				LTR
Flow Rate				28				51
Lane Capacity				1413				723
v/c				0.02				0.07
95% Queue Leng.				0.1				0.2
Control Delay				7.6				10.4
LOS				A				B
Approach Delay				1.2				10.4
Approach LOS								
Intersct. Delay		1.9						

## Step 1: MOVEMENT PRIORITIES

Major Street:									
Approach	NorthBound				SouthBound				
Priority	1U	1	2	3	4U	4	5	6	
Movement	U	L	T	R	U	L	T	R	

Minor Street:												
Approach			WestBound					EastBound				
Priority			7	8	9		10	11	12			
Movement			L	T	R		L	T	R			
Step 2: MOVEMENT DEMAND VOLUMES AND FLOW RATES												
Major Street:												
Approach			NorthBound					SouthBound				
Movement			1U	2	3		4U	4	5	6		
			U	L	T		U	L	T	R		
Volume, V(x)			115					25				
Flow Rate, v(x)			131					28				
25150												
28170												
Minor Street:												
Approach			WestBound					EastBound				
Movement			7	8	9		10	11	12			
			L	T	R		L	T	R			
Volume, V(x)			25					0				
Flow Rate, v(x)			28					0				
2023												
Step 3: CONFLICTING FLOW RATES												
Major Street:												
Approach			NorthBound					SouthBound				
Movement			1U	2	3		4U	4	5	6		
			U	L	T		U	L	T	R		
Flow Rate, v(x)			131					28				
Conflicting Flow, v(c,x)								28159				
28170												
Minor Street:												
Approach			WestBound					EastBound				
Movement			7	8	9		10	11	12			
			L	T	R		L	T	R			
Flow Rate, v(x)			28					0				
Conflicting Flow, v(c,x)			371					385				
23170												
Step 4: CRITICAL HEADWAYS and FOLLOW-UP HEADWAYS												
CRITICAL HEADWAYS												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
t(c,base)					4.1				7.1		6.5	
Single stage											6.2	
Stage I												
Stage II												
t(c,HV)					1.0				1.0		1.0	
P(HV)					0.03				0.01		0.03	
t(c,G)					0.0				0.2		0.2	
G					0				0		0	
t(3,LT)					0.0				0.7		0.0	
t(c)												
Single stage					4.13				6.41		6.53	
Stage I												
Stage II												
FOLLOW-UP HEADWAYS												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
t(f,base)					2.2				3.5		4.0	
t(f,HV)					0.9				0.9		0.9	
P(HV)					0.03				0.01		0.03	
t(f)					2.23				3.51		4.03	
3.31												
Step 5: POTENTIAL CAPACITIES												
NO UPSTREAM SIGNAL EFFECTS PRESENT												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
v(c,x)					159				371		385	
t(c,x)					4.13				6.41		6.53	
t(f,x)					2.23				3.51		4.03	
c(p,x)					1413				631		547	
876												

# Steps 6 - 9: MOVEMENT CAPACITIES

Pedestrian Impedance				
Approach	NB	SB	WB	EB
Movement	13	14	15	16
Pedestrian Flow Rate, $v(x)$	0	0	0	0
Lane Width, $w$				
Walking Speed, $S(p)$				
Pedestrian Blockage Factor, $f(pb)$				
Major-Street Left-Turn Movement		1	4	
Conflicting Flow, $v(c,x)$			159	
Potential Capacity, $c(p,x)$			1413	
Pedestrian Impedance Factor, $p(p,x)$			1.000	
Movement Capacity, $c(m,x)$			1413	
Probability of Queue-free State, $p(0,j)$			0.980	
Major L-Shared Prob. Q-free St., $p^*(0,j)$			0.978	
Minor-Street Right-Turn Movement		9	12	
Conflicting Flow, $v(c,x)$			170	
Potential Capacity, $c(p,x)$			876	
Pedestrian Impedance Factor, $p(p,x)$			1.000	
Movement Capacity, $c(m,x)$			876	
Probability of Queue-free State, $p(0,j)$			0.974	
Major-Street U-turn Movement		1U	4U	
Conflicting Flow, $v(c,x)$				
Potential Capacity, $c(p,x)$				
Capacity Adjustment Factor, $f(x)$				
Movement Capacity, $c(m,x)$				
Shared L/U Capacity, $c(SH)$				
Probability of Queue-free State, $p(0,j)$				
Minor-Street Through Movement		8	11	
Conflicting Flow, $v(c,x)$			385	
Potential Capacity, $c(p,x)$			547	
Pedestrian Impedance Factor, $p(p,x)$			1.000	
Capacity Adjustment Factor, $f(x)$			0.978	
Movement Capacity, $c(m,x)$			535	
Probability of Queue-free State, $p(0,j)$			1.000	
Minor-Street Left-Turn Movement		7	10	
Conflicting Flow, $v(c,x)$			371	
Potential Capacity, $c(p,x)$			631	
Pedestrian Impedance Factor, $p(p,x)$			1.000	
Major L, Minor T Adj. Imp. Factor, $p''$				
Major L, Minor T Impedance Factor, $p'$				
Capacity Adjustment Factor, $f(p,l)$			1.000	
Movement Capacity, $c(m,x)$			631	

## Step 11: CONTROL DELAY

CONTROL DELAY TO RANK 2 THROUGH 4 MOVEMENTS											
Approach	NB			SB			WestBound		EastBound		
Movement	1U	1	4U	4	7	8	9	10	11	12	
	U	L	U	L	L	T	R	L	T	R	
Flow Rate				28				28	0	23	
Movement Cap.				1413				631	535	876	
Lane Config.				LT					LTR		
Shared Cap.									723		
Control Delay				7.6					10.4		

## CONTROL DELAY TO RANK 1 MOVEMENTS

Approach	NB	SB
Movement	2	5
Number of Major Street Through Lanes, $N$	1	1
Proportion of Rank 1 vehicles not blocked, $p^*(0,j)$		0.978
Delay to Major Left-turning Vehicles, $d(MLT)$	7.3	7.6
Major Street Through Vehicles in Shared Lane, $vi1$		170
Major Street Turning Vehicles in Shared Lane, $vi2$		28
Saturation Flow Rate for Major Street Through, $si1$	1800	1800
Saturation Flow Rate for Major Street Right-Turn, $si2$	1500	
Delay to Rank 1 Vehicles, $d(Rank1)$		0.2



Steps 12 - 13: APPROACH/INTERSECTION CONTROL DELAY and 95% QUEUE LENGTHS														
Approach	1U	NB	1	4U	SB	4	7	WestBound	8	9	10	EastBound	11	12
Movement						LT							LTR	
Lane Config.														
Flow Rate						28							51	
Lane Capacity						1413							723	
v/c						0.02							0.07	
95% Queue Leng.						0.1							0.2	
Control Delay						7.6							10.4	
LOS						A							B	
Approach Delay						1.2							10.4	
Approach LOS														
Intersct. Delay			1.9											

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## HCS 2010 Two Way Stop Intersections Release 6.80

## TWO-WAY STOP CONTROL (TWSC) Analysis

File Name: 2047 PM RD & N RAMP  
 Analyst: Garrett Stinson  
 Agency/Co.: GDOT Roadway Design  
 Date Performed: 12/9/2020  
 Time Analyzed: 2047pm  
 Jurisdiction: Oconee D1  
 Analysis Year: 2047  
 Project Description: P.I. 0007685  
 Units: U.S. Customary  
 Intersection Name: Dials Mill RD. & N Ramp  
 Major Street Direction: North-South  
 East/West Street Name: A North Ramp  
 North/South Street Name: Dials Mill RD  
 Analysis Time Period (hrs): 0.25

## Vehicle Volumes and Adjustments

Major Street: Approach Movement	1U U	NorthBound 1 L	2 T	3 R		4U U	SouthBound 4 L	5 T	6 R
Volume		35	140					105	30
Peak Hour Factor, PHF					0.88				
Hourly Flow Rate, HFR		40	159					119	34
Percent Heavy Vehicles		3							
Number of Lanes	0	0	1	0		0	0	1	0
Lane Configuration		LT							TR
Median Type					Undivided				
Median Storage									
RT channelized?				No					No
Left-Turn Lane Storage									
Upstream Signal?					Not Present				

Minor street: Approach Movement	WestBound 7 L	8 T	9 R		EastBound 10 L	11 T	12 R
Volume	20	0	15				
Peak Hour Factor, PHF				0.88			
Hourly Flow Rate, HFR	23	0	17				
Percent Heavy Vehicles	3	3	3				
Number of Lanes	0	1	0		0	0	0
Lane Configuration		LTR					
RT channelized?			No				No
Flared Approach/Storage	No	/			No	/	
Percent Grade		0					

## Pedestrian Volumes and Adjustments

Approach Movement	NB 13	SB 14	WB 15	EB 16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)				
Walking Speed (ft/sec)				
Pedestrian Blockage Factor, f(pb)				

## Delay, Queue Length, and Level of Service

Approach Movement Lane Config.	NB 1 LT	SB 4	7	WestBound 8 LTR	9	10	EastBound 11	12
Flow Rate	40			40				
Lane Capacity	1420			713				
v/c	0.03			0.06				
95% Queue Leng.	0.1			0.2				
Control Delay	7.6			10.4				
LOS	A			B				
Approach Delay	1.7			10.4				
Approach LOS				B				
Intersct. Delay	1.9							

## Step 1: MOVEMENT PRIORITIES

Major Street: Approach Priority Movement	1U U	NorthBound 1 L	2 T	3 R		4U U	SouthBound 4 L	5 T	6 R
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Minor Street:												
Approach			WestBound					EastBound				
Priority			7	8	9		10	11	12			
Movement			L	T	R		L	T	R			
Step 2: MOVEMENT DEMAND VOLUMES AND FLOW RATES												
Major Street:												
Approach			NorthBound					SouthBound				
Movement			1U	2	3		4U	5	6			
			U	L	T		U	L	T	R		
Volume, V(x)			35	140				105	30			
Flow Rate, v(x)			40	159				119	34			
Minor Street:												
Approach			WestBound					EastBound				
Movement			7	8	9		10	11	12			
			L	T	R		L	T	R			
Volume, V(x)			20	0	15							
Flow Rate, v(x)			23	0	17							
Step 3: CONFLICTING FLOW RATES												
Major Street:												
Approach			NorthBound					SouthBound				
Movement			1U	2	3		4U	5	6			
			U	L	T		U	L	T	R		
Flow Rate, v(x)			40	159				119	34			
Conflicting Flow, v(c,x)			153									
Minor Street:												
Approach			WestBound					EastBound				
Movement			7	8	9		10	11	12			
			L	T	R		L	T	R			
Flow Rate, v(x)			23	0	17							
Conflicting Flow, v(c,x)			375	392	159							
Step 4: CRITICAL HEADWAYS and FOLLOW-UP HEADWAYS												
CRITICAL HEADWAYS												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
t(c,base)												
Single Stage				4.1			7.1	6.5	6.2			
Stage I												
Stage II												
t(c,HV)				1.0			1.0	1.0	1.0			
P(HV)				0.03			0.03	0.03	0.03			
t(c,G)				0.0			0.2	0.2	0.1			
G				0			0	0	0			
t(3,LT)				0.0			0.7	0.0	0.0			
t(c)												
Single stage				4.13			6.43	6.53	6.23			
Stage I												
Stage II												
FOLLOW-UP HEADWAYS												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
t(f,base)				2.2			3.5	4.0	3.3			
t(f,HV)				0.9			0.9	0.9	0.9			
P(HV)				0.03			0.03	0.03	0.03			
t(f)				2.23			3.53	4.03	3.33			
Step 5: POTENTIAL CAPACITIES												
NO UPSTREAM SIGNAL EFFECTS PRESENT												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
v(c,x)				153			375	392	159			
t(c,x)				4.13			6.43	6.53	6.23			
t(f,x)				2.23			3.53	4.03	3.33			
c(p,x)				1420			624	542	883			

# Steps 6 - 9: MOVEMENT CAPACITIES

Pedestrian Impedance				
Approach	NB	SB	WB	EB
Movement	13	14	15	16
Pedestrian Flow Rate, $v(x)$	0	0	0	0
Lane Width, $w$				
Walking Speed, $S(p)$				
Pedestrian Blockage Factor, $f(pb)$				
Major-Street Left-Turn Movement		1	4	
Conflicting Flow, $v(c,x)$		153		
Potential Capacity, $c(p,x)$		1420		
Pedestrian Impedance Factor, $p(p,x)$		1.000		
Movement Capacity, $c(m,x)$		1420		
Probability of Queue-free State, $p(0,j)$		0.972		
Major L-Shared Prob. Q-free St., $p^*(0,j)$		0.969		
Minor-Street Right-Turn Movement		9	12	
Conflicting Flow, $v(c,x)$		159		
Potential Capacity, $c(p,x)$		883		
Pedestrian Impedance Factor, $p(p,x)$		1.000		
Movement Capacity, $c(m,x)$		883		
Probability of Queue-free State, $p(0,j)$		0.981		
Major-Street U-turn Movement		1U	4U	
Conflicting Flow, $v(c,x)$				
Potential Capacity, $c(p,x)$				
Capacity Adjustment Factor, $f(x)$				
Movement Capacity, $c(m,x)$				
Shared L/U Capacity, $c(SH)$				
Probability of Queue-free State, $p(0,j)$				
Minor-Street Through Movement		8	11	
Conflicting Flow, $v(c,x)$		392		
Potential Capacity, $c(p,x)$		542		
Pedestrian Impedance Factor, $p(p,x)$		1.000		
Capacity Adjustment Factor, $f(x)$		0.969		
Movement Capacity, $c(m,x)$		525		
Probability of Queue-free State, $p(0,j)$		1.000		
Minor-Street Left-Turn Movement		7	10	
Conflicting Flow, $v(c,x)$		375		
Potential Capacity, $c(p,x)$		624		
Pedestrian Impedance Factor, $p(p,x)$		1.000		
Major L, Minor T Adj. Imp. Factor, $p''$				
Major L, Minor T Impedance Factor, $p'$				
Capacity Adjustment Factor, $f(p,l)$		1.000		
Movement Capacity, $c(m,x)$		624		

## Step 11: CONTROL DELAY

CONTROL DELAY TO RANK 2 THROUGH 4 MOVEMENTS											
Approach	NB		SB		WestBound			EastBound			
Movement	1U	1	4U	4	7	8	9	10	11	12	
	U	L	U	L	L	T	R	L	T	R	
Flow Rate		40			23	0	17				
Movement Cap.		1420			624	525	883				
Lane Config.		LT				LTR					
Shared Cap.						713					
Control Delay		7.6				10.4					

## CONTROL DELAY TO RANK 1 MOVEMENTS

Approach	NB	SB
Movement	2	5
Number of Major Street Through Lanes, $N$	1	1
Proportion of Rank 1 vehicles not blocked, $p^*(0,j)$	0.969	
Delay to Major Left-turning Vehicles, $d(MLT)$	7.6	7.6
Major Street Through Vehicles in Shared Lane, $vi1$		23
Major Street Turning Vehicles in Shared Lane, $vi2$	40	57
Saturation Flow Rate for Major Street Through, $si1$	1800	1800
Saturation Flow Rate for Major Street Right-Turn, $si2$		1500
Delay to Rank 1 Vehicles, $d(Rank1)$	0.2	0.3

Steps 12 - 13: APPROACH/INTERSECTION CONTROL DELAY and 95% QUEUE LENGTHS														
Approach	1U	NB	1	4U	SB	4	7	WestBound	8	9	10	EastBound	11	12
Movement			LT						LTR					
Lane Config.														
Flow Rate			40						40					
Lane Capacity			1420						713					
v/c			0.03						0.06					
95% Queue Leng.			0.1						0.2					
Control Delay			7.6						10.4					
LOS			A						B					
Approach Delay			1.7						10.4					
Approach LOS									B					
Intersct. Delay			1.9											

This TWSC text report was created on 01/11/2021 09:59:38



## HCS 2010 Two Way Stop Intersections Release 6.80

## TWO-WAY STOP CONTROL (TWSC) Analysis

File Name: 2047 PM RD & S RAMP  
 Analyst: Garrett Stinson  
 Agency/Co.: GDOT Roadway Design  
 Date Performed: 12/9/2020  
 Time Analyzed: 2047pm  
 Jurisdiction: Oconee D1  
 Analysis Year: 2047  
 Project Description: P.I. 0007685  
 Units: U.S. Customary  
 Intersection Name: Dials Mill RD. & S Ramp  
 Major Street Direction: North-South  
 East/West Street Name: A South Ramp  
 North/South Street Name: Dials Mill RD  
 Analysis Time Period (hrs): 0.25

## Vehicle Volumes and Adjustments

Major Street: Approach Movement	1U U	NorthBound 1 L	2 T	3 R		4U U	SouthBound 4 L	5 T	6 R
Volume			140	15			15	105	
Peak Hour Factor, PHF					0.88				
Hourly Flow Rate, HFR			159	17			17	119	
Percent Heavy Vehicles							3		
Number of Lanes	0	0	1	0		0	0	1	0
Lane Configuration				TR			LT		
Median Type					Undivided				
Median Storage									
RT channelized?				No					No
Left-Turn Lane Storage									
Upstream Signal?					Not Present				
Minor street: Approach Movement		WestBound 7 L	8 T	9 R			EastBound 10 L	11 T	12 R
Volume							25	0	25
Peak Hour Factor, PHF					0.88				
Hourly Flow Rate, HFR							28	0	28
Percent Heavy Vehicles							1	3	1
Number of Lanes		0	0	0			0	1	0
Lane Configuration								LTR	
RT channelized?				No					No
Flared Approach/Storage		No	/				No	/	
Percent Grade								0	

## Pedestrian Volumes and Adjustments

Approach Movement		NB 13		SB 14		WB 15		EB 16
Flow (ped/hr)		0		0		0		0
Lane Width (ft)								
Walking Speed (ft/sec)								
Pedestrian Blockage Factor, f(pb)								

## Delay, Queue Length, and Level of Service

Approach Movement Lane Config.	1U U	NB 1	4U U	SB 4 LT	7	WestBound 8	9	10	EastBound 11 LTR	12
Flow Rate				17					56	
Lane Capacity				1393					784	
v/c				0.01					0.07	
95% Queue Leng.				0.0					0.2	
Control Delay				7.6					9.9	
LOS				A					A	
Approach Delay				1.0					9.9	
Approach LOS										
Intersct. Delay		1.9								

## Step 1: MOVEMENT PRIORITIES

Major Street: Approach Priority Movement	1U U	NorthBound 1 L	2 T	3 R		4U U	SouthBound 4 L	5 T	6 R
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Minor Street:												
Approach			WestBound					EastBound				
Priority			7	8	9		10	11	12			
Movement			L	T	R		L	T	R			
Step 2: MOVEMENT DEMAND VOLUMES AND FLOW RATES												
Major Street:												
Approach			NorthBound					SouthBound				
Movement			1U	2	3		4U	4	5	6		
			U	L	T		U	L	T	R		
Volume, V(x)				140	15		15	105				
Flow Rate, v(x)				159	17		17	119				
Minor Street:												
Approach			WestBound					EastBound				
Movement			7	8	9		10	11	12			
			L	T	R		L	T	R			
Volume, V(x)							25	0	25			
Flow Rate, v(x)							28	0	28			
Step 3: CONFLICTING FLOW RATES												
Major Street:												
Approach			NorthBound					SouthBound				
Movement			1U	2	3		4U	4	5	6		
			U	L	T		U	L	T	R		
Flow Rate, v(x)				159	17		17	119				
Conflicting Flow,v(c,x)							176					
Minor Street:												
Approach			WestBound					EastBound				
Movement			7	8	9		10	11	12			
			L	T	R		L	T	R			
Flow Rate, v(x)							28	0	28			
Conflicting Flow, v(c,x)							320	329	119			
Step 4: CRITICAL HEADWAYS and FOLLOW-UP HEADWAYS												
CRITICAL HEADWAYS												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
t(c,base)												
Single stage					4.1					7.1	6.5	6.2
Stage I												
Stage II												
t(c,HV)					1.0					1.0	1.0	1.0
P(HV)					0.03					0.01	0.03	0.01
t(c,G)					0.0					0.2	0.2	0.1
G					0					0	0	0
t(3,LT)					0.0					0.7	0.0	0.0
t(c)												
Single stage					4.13					6.41	6.53	6.21
Stage I												
Stage II												
FOLLOW-UP HEADWAYS												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
t(f,base)						2.2				3.5	4.0	3.3
t(f,HV)						0.9				0.9	0.9	0.9
P(HV)						0.03				0.01	0.03	0.01
t(f)						2.23				3.51	4.03	3.31
Step 5: POTENTIAL CAPACITIES												
NO UPSTREAM SIGNAL EFFECTS PRESENT												
Approach			NB		SB		WestBound		EastBound			
Movement			1U	1	4U	4	7	8	9	10	11	12
			U	L	U	L	L	T	R	L	T	R
v(c,x)						176				320	329	119
t(c,x)						4.13				6.41	6.53	6.21
t(f,x)						2.23				3.51	4.03	3.31
c(p,x)						1393				675	588	935

Steps 6 - 9: MOVEMENT CAPACITIES

Pedestrian Impedance				
Approach	NB	SB	WB	EB
Movement	13	14	15	16
Pedestrian Flow Rate, $v(x)$	0	0	0	0
Lane Width, $w$				
Walking Speed, $S(p)$				
Pedestrian Blockage Factor, $f(pb)$				
Major-Street Left-Turn Movement		1	4	
Conflicting Flow, $v(c,x)$			176	
Potential Capacity, $c(p,x)$			1393	
Pedestrian Impedance Factor, $p(p,x)$			1.000	
Movement Capacity, $c(m,x)$			1393	
Probability of Queue-free State, $p(0,j)$			0.988	
Major L-Shared Prob. Q-free St., $p^*(0,j)$			0.987	
Minor-Street Right-Turn Movement		9	12	
Conflicting Flow, $v(c,x)$			119	
Potential Capacity, $c(p,x)$			935	
Pedestrian Impedance Factor, $p(p,x)$			1.000	
Movement Capacity, $c(m,x)$			935	
Probability of Queue-free State, $p(0,j)$			0.970	
Major-Street U-turn Movement		1U	4U	
Conflicting Flow, $v(c,x)$				
Potential Capacity, $c(p,x)$				
Capacity Adjustment Factor, $f(x)$				
Movement Capacity, $c(m,x)$				
Shared L/U Capacity, $c(SH)$				
Probability of Queue-free State, $p(0,j)$				
Minor-Street Through Movement		8	11	
Conflicting Flow, $v(c,x)$			329	
Potential Capacity, $c(p,x)$			588	
Pedestrian Impedance Factor, $p(p,x)$			1.000	
Capacity Adjustment Factor, $f(x)$			0.987	
Movement Capacity, $c(m,x)$			580	
Probability of Queue-free State, $p(0,j)$			1.000	
Minor-Street Left-Turn Movement		7	10	
Conflicting Flow, $v(c,x)$			320	
Potential Capacity, $c(p,x)$			675	
Pedestrian Impedance Factor, $p(p,x)$			1.000	
Major L, Minor T Adj. Imp. Factor, $p''$				
Major L, Minor T Impedance Factor, $p'$				
Capacity Adjustment Factor, $f(p,l)$			1.000	
Movement Capacity, $c(m,x)$			675	

Step 11: CONTROL DELAY

CONTROL DELAY TO RANK 2 THROUGH 4 MOVEMENTS											
Approach	NB			SB			WestBound		EastBound		
Movement	1U	1	4U	4	7	8	9	10	11	12	
	U	L	U	L	L	T	R	L	T	R	
Flow Rate				17				28	0	28	
Movement Cap.				1393				675	580	935	
Lane Config.				LT					LTR		
Shared Cap.									784		
Control Delay				7.6					9.9		

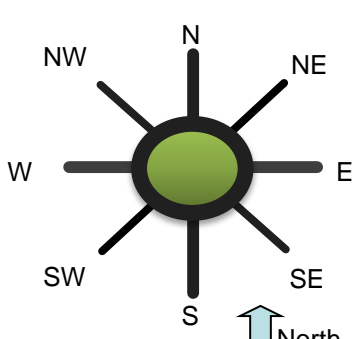
CONTROL DELAY TO RANK 1 MOVEMENTS

Approach	NB	SB
Movement	2	5
Number of Major Street Through Lanes, $N$	1	1
Proportion of Rank 1 vehicles not blocked, $p^*(0,j)$		0.987
Delay to Major Left-turning Vehicles, $d(MLT)$	7.3	7.6
Major Street Through Vehicles in Shared Lane, $vi1$		119
Major Street Turning Vehicles in Shared Lane, $vi2$		17
Saturation Flow Rate for Major Street Through, $si1$	1800	1800
Saturation Flow Rate for Major Street Right-Turn, $si2$	1500	
Delay to Rank 1 Vehicles, $d(Rank1)$		0.1

Steps 12 - 13: APPROACH/INTERSECTION CONTROL DELAY and 95% QUEUE LENGTHS											
Approach	NB		SB		WestBound		EastBound				
Movement	1U	1	4U	4	7	8	9	10	11	12	
Lane Config.				LT					LTR		
Flow Rate				17					56		
Lane Capacity				1393					784		
v/c				0.01					0.07		
95% Queue Leng.				0.0					0.2		
Control Delay				7.6					9.9		
LOS				A					A		
Approach Delay				1.0					9.9		
Approach LOS											
Intersct. Delay		1.9									

This TWSC text report was created on 01/11/2021 10:00:45

General & Site Information <span style="float: right;">v 4.2</span>									
Analyst:		Garrett Stinson							
Agency/Co:		GDOT							
Date:		12/17/2020							
Project or PI#:		0016350							
Year, Peak Hour:		2047 am							
County/District:		Oconee/ District 1							
Intersection Name:		DIALS MILL RD. / NORTH RAMP							



Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
<b>Exit Legs (TO)</b>	N (1), vph	0		20		115		0	
	NE (2), vph								
	E (3), vph	0		0		0		0	
	SE (4), vph								
	S (5), vph	150		15		0		0	
	SW (6), vph								
	W (7), vph	40		0		40		0	
	NW (8), vph								
Output	Total Vehicles	190	0	35	0	155	0	0	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	93.0%	100.0%	93.0%	100.0%	93.0%	100.0%	93.0%	100.0%
% Heavy Vehicles	7.0%	0.0%	7.0%	0.0%	7.0%	0.0%	7.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.88	0.95	0.88	0.95	0.88	0.95	0.88	0.95
F <sub>HV</sub>	0.935	1.000	0.935	1.000	0.935	1.000	1.000	1.000
F <sub>ped</sub>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	24	0	140	0	0	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	182	0	18	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	49	0	0	0	49	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	231	0	43	0	188	0	0	0
Conflicting flow, pcu/h	67	0	188	0	0	0	0	0

<b>Results: Approach Measures of Effectiveness</b>								
HCM 2010 Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	988	NA	875	NA	1056	NA	1130	NA
Entry Flow Rates, vph	216	0	40	0	176	0	0	0
V/C ratio	0.22		0.05		0.17			
Control Delay, sec/pcu	5.8		4.5		4.9		3.2	
LOS	A		A		A		A	
Average Queue (ft)	9		1		6			
95th % Queue (ft)	22		4		16		0	

<b>Overall Intersection Measures of Effectiveness</b>					
Int Control Delay (sec)	5.3	Int LOS	A	Max Approach V/C	0.22

Notes:

v 4.2

Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

F<sub>HV</sub> = heavy vehicle factor

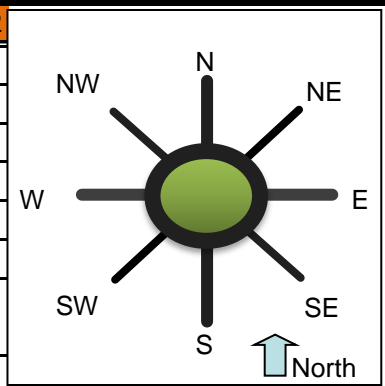
pcu = passenger car unit

<b>Bypass Lane Merge Point Analysis (if applicable)</b>						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
<b>Volumes</b>						
Right Turn Volume removed from Entry Leg						
<b>Volume Characteristics (for entry leg)</b>						
PHF						
F <sub>HV</sub>						
F <sub>ped</sub>						
<b>NOTE: Volume Characteristics for Exit Leg are already taken into account</b>						
<b>Entry/Conflicting Flows</b>						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
<b>Bypass Lane Results (HCM 2010 Edition)</b>						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						



**General & Site Information** v 4.2

Analyst: Garrett Stinson  
 Agency/Co: GDOT  
 Date: 12/17/2020  
 Project or PI#: 0016350  
 Year, Peak Hour: 2027 pm peak  
 County/District: Oconee/ District 1  
 Intersection Name: DIALS MILL RD. / NORTH RAMP



Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit Legs (TO)	N (1), vph	0		20		115		0	
	NE (2), vph								
	E (3), vph	0		0		0		0	
	SE (4), vph								
	S (5), vph	150		15		0		0	
	SW (6), vph								
	W (7), vph	40		0		40		0	
	NW (8), vph								
Output	Total Vehicles	190	0	35	0	155	0	0	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	94.0%	100.0%	97.0%	100.0%	96.0%	100.0%	97.0%	100.0%
% Heavy Vehicles	6.0%	0.0%	3.0%	0.0%	4.0%	0.0%	3.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
F <sub>HV</sub>	0.943	1.000	0.971	1.000	0.962	1.000	1.000	1.000
F <sub>ped</sub>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	23	0	136	0	0	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	181	0	18	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	48	0	0	0	47	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	229	0	41	0	183	0	0	0
Conflicting flow, pcu/h	65	0	183	0	0	0	0	0

<b>Results: Approach Measures of Effectiveness</b>								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	1219	NA	1111	NA	1327	NA	1380	NA
Entry Flow Rates, vph	216	0	40	0	176	0	0	0
V/C ratio	0.18		0.04		0.13			
Control Delay, sec/pcu	4.5		3.5		3.8		2.6	
LOS	A		A		A		A	
Average Queue (ft)	7		1		5			
95th % Queue (ft)	17		3		12			

<b>Overall Intersection Measures of Effectiveness</b>					
Int Control Delay (sec)	4.1	Int LOS	A	Max Approach V/C	0.18

Notes:

v 4.2

#### Unit Legend:

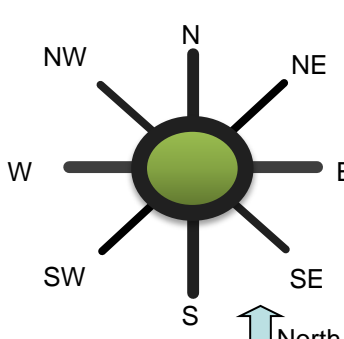
vph = vehicles per hour

PHF = peak hour factor

 $F_{HV}$  = heavy vehicle factor

pcu = passenger car unit

<b>Bypass Lane Merge Point Analysis (if applicable)</b>						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	S (5)				
Select Exit Leg for Bypass (TO)	E (3)	E (3)				
Does the bypass have a dedicated receiving lane?	No	No				
<b>Volumes</b>						
Right Turn Volume removed from Entry Leg	105	70				
<b>Volume Characteristics (for entry leg)</b>						
PHF	0.88	0.88				
$F_{HV}$	0.94	0.96				
$F_{ped}$	1.00	1.00				
<b>NOTE: Volume Characteristics for Exit Leg are already taken into account</b>						
<b>Entry/Conflicting Flows</b>						
Entry Flow, pcu/hr	126	83				
Conflicting Flow, pcu/hr	0	0				
<b>Bypass Lane Results (HCM 6th Edition)</b>						
Entry Capacity of Bypass, vph	1302	1327				
Flow Rates of Exiting Traffic, vph	119	80				
V/C ratio	0.09	0.06				
Control Delay, s/veh	3.5	3.2				
LOS	A	A				
95th % Queue (veh)	0	0				
95th % Queue (ft)	8	5				
Approach w/Bypass Delay, s/veh	4.1	3.6				
Approach w/Bypass LOS	A	A				

General & Site Information								v 4.2	
Analyst:		Garrett Stinson							
Agency/Co:		GDOT							
Date:		12/17/2020							
Project or PI#:		0016350							
Year, Peak Hour:		2047 pm							
County/District:		Oconee/ District 1							
Intersection Name:		DIALS MILL RD. / NORTH RAMP							
Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
<b>Exit Legs (TO)</b>	N (1), vph	0		35		140		0	
	NE (2), vph								
	E (3), vph	0		0		0		0	
	SE (4), vph								
	S (5), vph	105		30		0		0	
	SW (6), vph								
	W (7), vph	30		0		35		0	
	NW (8), vph								
Output	Total Vehicles	135	0	65	0	175	0	0	0
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		93.0%	100.0%	93.0%	100.0%	93.0%	100.0%	93.0%	100.0%
% Heavy Vehicles		7.0%	0.0%	7.0%	0.0%	7.0%	0.0%	7.0%	0.0%
% Bicycle		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.88	0.95	0.88	0.95	0.88	0.95	0.88	0.95
F <sub>HV</sub>		0.935	1.000	0.935	1.000	0.935	1.000	1.000	1.000
F <sub>ped</sub>		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h		0	0	43	0	170	0	0	0
NE (2), pcu/h		0	0	0	0	0	0	0	0
E (3), pcu/h		0	0	0	0	0	0	0	0
SE (4), pcu/h		0	0	0	0	0	0	0	0
S (5), pcu/h		128	0	36	0	0	0	0	0
SW (6), pcu/h		0	0	0	0	0	0	0	0
W (7), pcu/h		36	0	0	0	43	0	0	0
NW (8), pcu/h		0	0	0	0	0	0	0	0
Entry flow, pcu/h		164	0	79	0	213	0	0	0
Conflicting flow, pcu/h		79	0	213	0	0	0	0	0

<b>Results: Approach Measures of Effectiveness</b>								
HCM 2010 Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	976	NA	854	NA	1056	NA	1130	NA
Entry Flow Rates, vph	153	0	74	0	199	0	0	0
V/C ratio	0.16		0.09		0.19			
Control Delay, sec/pcu	5.2		5.0		5.1		3.2	
LOS	A		A		A		A	
Average Queue (ft)	5		3		7			
95th % Queue (ft)	15		8		18		0	
<b>Overall Intersection Measures of Effectiveness</b>								
Int Control Delay (sec)	5.1		Int LOS	A		Max Approach V/C	0.19	

Notes:

v 4.2

#### Unit Legend:

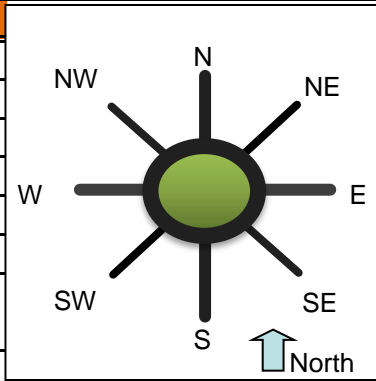
vph = vehicles per hour

PHF = peak hour factor

 $F_{HV}$  = heavy vehicle factor

pcu = passenger car unit

<b>Bypass Lane Merge Point Analysis (if applicable)</b>						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
<b>Volumes</b>						
Right Turn Volume removed from Entry Leg						
<b>Volume Characteristics (for entry leg)</b>						
PHF						
$F_{HV}$						
$F_{ped}$						
<b>NOTE: Volume Characteristics for Exit Leg are already taken into account</b>						
<b>Entry/Conflicting Flows</b>						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
<b>Bypass Lane Results (HCM 2010 Edition)</b>						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information v 4.2									
Analyst:		Garrett Stinson							
Agency/Co:		GDOT							
Date:		12/17/2020							
Project or PI#:		0016350							
Year, Peak Hour:		2047 pm peak							
County/District:		Oconee/ District 1							
Intersection Name:		DIALS MILL RD. / NORTH RAMP							
									
Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit Legs (TO)	N (1), vph	0		35		140		0	
	NE (2), vph								
	E (3), vph	0		0		0		0	
	SE (4), vph								
	S (5), vph	105		30		0		0	
	SW (6), vph								
	W (7), vph	30		0		35		0	
	NW (8), vph								
Output	Total Vehicles	135	0	65	0	175	0	0	0
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		94.0%	100.0%	97.0%	100.0%	96.0%	100.0%	97.0%	100.0%
% Heavy Vehicles		6.0%	0.0%	3.0%	0.0%	4.0%	0.0%	3.0%	0.0%
% Bicycle		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
F <sub>HV</sub>		0.943	1.000	0.971	1.000	0.962	1.000	1.000	1.000
F <sub>ped</sub>		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h		0	0	41	0	165	0	0	0
NE (2), pcu/h		0	0	0	0	0	0	0	0
E (3), pcu/h		0	0	0	0	0	0	0	0
SE (4), pcu/h		0	0	0	0	0	0	0	0
S (5), pcu/h		126	0	35	0	0	0	0	0
SW (6), pcu/h		0	0	0	0	0	0	0	0
W (7), pcu/h		36	0	0	0	41	0	0	0
NW (8), pcu/h		0	0	0	0	0	0	0	0
Entry flow, pcu/h		163	0	76	0	207	0	0	0
Conflicting flow, pcu/h		76	0	207	0	0	0	0	0

<b>Results: Approach Measures of Effectiveness</b>								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	1204	NA	1085	NA	1327	NA	1380	NA
Entry Flow Rates, vph	153	0	74	0	199	0	0	0
V/C ratio	0.13		0.07		0.15			
Control Delay, sec/pcu	4.1		3.9		3.9		2.6	
LOS	A		A		A		A	
Average Queue (ft)	4		2		5			
95th % Queue (ft)	12		6		14			
<b>Overall Intersection Measures of Effectiveness</b>								
Int Control Delay (sec)	4.0		Int LOS	A		Max Approach V/C	0.15	

Notes:

v 4.2

#### Unit Legend:

vph = vehicles per hour

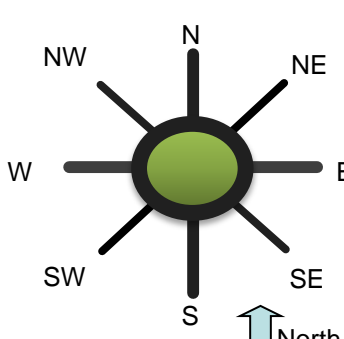
PHF = peak hour factor

 $F_{HV}$  = heavy vehicle factor

pcu = passenger car unit

<b>Bypass Lane Merge Point Analysis (if applicable)</b>						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	S (5)				
Select Exit Leg for Bypass (TO)	E (3)	E (3)				
Does the bypass have a dedicated receiving lane?	No	No				
<b>Volumes</b>						
Right Turn Volume removed from Entry Leg	105	70				
<b>Volume Characteristics (for entry leg)</b>						
PHF	0.88	0.88				
$F_{HV}$	0.94	0.96				
$F_{ped}$	1.00	1.00				
<b>NOTE: Volume Characteristics for Exit Leg are already taken into account</b>						
<b>Entry/Conflicting Flows</b>						
Entry Flow, pcu/hr	126	83				
Conflicting Flow, pcu/hr	0	0				
<b>Bypass Lane Results (HCM 6th Edition)</b>						
Entry Capacity of Bypass, vph	1302	1327				
Flow Rates of Exiting Traffic, vph	119	80				
V/C ratio	0.09	0.06				
Control Delay, s/veh	3.5	3.2				
LOS	A	A				
95th % Queue (veh)	0	0				
95th % Queue (ft)	8	5				
Approach w/Bypass Delay, s/veh	3.8	3.7				
Approach w/Bypass LOS	A	A				



General & Site Information								v 4.2	
Analyst:		Garrett Stinson							
Agency/Co:		GDOT							
Date:		12/17/2020							
Project or PI#:		0016350							
Year, Peak Hour:		2047 am							
County/District:		Oconee/ District 1							
Intersection Name:		DIALS MILL RD. / SOUTH RAMP							
Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
<b>Exit Legs (TO)</b>	N (1), vph	0		0		115		25	
	NE (2), vph								
	E (3), vph	25		0		25		0	
	SE (4), vph								
	S (5), vph	150		0		0		20	
	SW (6), vph								
	W (7), vph	0		0		0		0	
	NW (8), vph								
Output	Total Vehicles	175	0	0	0	140	0	45	0
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		93.0%	100.0%	93.0%	100.0%	93.0%	100.0%	93.0%	100.0%
% Heavy Vehicles		7.0%	0.0%	7.0%	0.0%	7.0%	0.0%	7.0%	0.0%
% Bicycle		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.88	0.95	0.88	0.95	0.88	0.95	0.88	0.95
F <sub>HV</sub>		0.935	1.000	1.000	1.000	0.935	1.000	0.935	1.000
F <sub>ped</sub>		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h		0	0	0	0	140	0	30	0
NE (2), pcu/h		0	0	0	0	0	0	0	0
E (3), pcu/h		30	0	0	0	30	0	0	0
SE (4), pcu/h		0	0	0	0	0	0	0	0
S (5), pcu/h		182	0	0	0	0	0	24	0
SW (6), pcu/h		0	0	0	0	0	0	0	0
W (7), pcu/h		0	0	0	0	0	0	0	0
NW (8), pcu/h		0	0	0	0	0	0	0	0
Entry flow, pcu/h		213	0	0	0	170	0	55	0
Conflicting flow, pcu/h		0	0	0	0	61	0	213	0

Results: Approach Measures of Effectiveness								
HCM 2010 Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	1056	NA	1130	NA	994	NA	854	NA
Entry Flow Rates, vph	199	0	0	0	159	0	51	0
V/C ratio	0.19				0.16		0.06	
Control Delay, sec/pcu	5.1		3.2		5.1		4.8	
LOS	A		A		A		A	
Average Queue (ft)	7				6		2	
95th % Queue (ft)	18		0		15		5	
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	5.1		Int LOS	A		Max Approach V/C	0.19	

Notes:

v 4.2

## Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

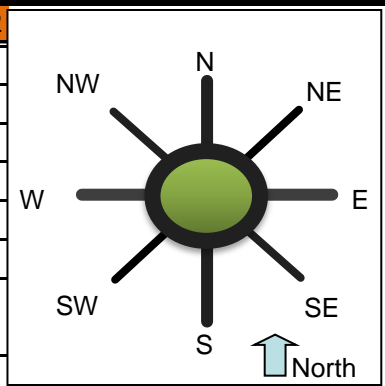
 $F_{HV}$  = heavy vehicle factor

pcu = passenger car unit

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
$F_{HV}$						
$F_{ped}$						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 2010 Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

**General & Site Information** v 4.2

Analyst: Garrett Stinson  
 Agency/Co: GDOT  
 Date: 12/17/2020  
 Project or PI#: 0016350  
 Year, Peak Hour: 2047 am peak  
 County/District: Oconee/ District 1  
 Intersection Name: DIALS MILL RD. / SOUTH RAMP



Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit Legs (TO)	N (1), vph	0		0		115		25	
	NE (2), vph								
	E (3), vph	25		0		25		0	
	SE (4), vph								
	S (5), vph	150		0		0		20	
	SW (6), vph								
	W (7), vph	0		0		0		0	
	NW (8), vph								
Output	Total Vehicles	175	0	0	0	140	0	45	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	94.0%	100.0%	97.0%	100.0%	96.0%	100.0%	97.0%	100.0%
% Heavy Vehicles	6.0%	0.0%	3.0%	0.0%	4.0%	0.0%	3.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
F <sub>HV</sub>	0.943	1.000	1.000	1.000	0.962	1.000	0.971	1.000
F <sub>ped</sub>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	136	0	29	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	30	0	0	0	30	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	181	0	0	0	0	0	23	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	0	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	211	0	0	0	165	0	53	0
Conflicting flow, pcu/h	0	0	0	0	59	0	211	0

<b>Results: Approach Measures of Effectiveness</b>								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	1302	NA	1380	NA	1249	NA	1081	NA
Entry Flow Rates, vph	199	0	0	0	159	0	51	0
V/C ratio	0.15				0.13		0.05	
Control Delay, sec/pcu	4.0		2.6		3.9		3.7	
LOS	A		A		A		A	
Average Queue (ft)	6				4		1	
95th % Queue (ft)	14				11		4	
<b>Overall Intersection Measures of Effectiveness</b>								
Int Control Delay (sec)	4.0		Int LOS	A		Max Approach V/C	0.15	

Notes:

v 4.2

## Unit Legend:

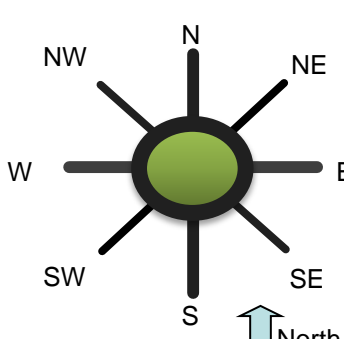
vph = vehicles per hour

PHF = peak hour factor

F<sub>HV</sub> = heavy vehicle factor

pcu = passenger car unit

<b>Bypass Lane Merge Point Analysis (if applicable)</b>						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	S (5)				
Select Exit Leg for Bypass (TO)	E (3)	E (3)				
Does the bypass have a dedicated receiving lane?	No	No				
<b>Volumes</b>						
Right Turn Volume removed from Entry Leg	105	70				
<b>Volume Characteristics (for entry leg)</b>						
PHF	0.88	0.88				
F <sub>HV</sub>	0.94	0.96				
F <sub>ped</sub>	1.00	1.00				
<b>NOTE: Volume Characteristics for Exit Leg are already taken into account</b>						
<b>Entry/Conflicting Flows</b>						
Entry Flow, pcu/hr	126	83				
Conflicting Flow, pcu/hr	60	60				
<b>Bypass Lane Results (HCM 6th Edition)</b>						
Entry Capacity of Bypass, vph	1225	1249				
Flow Rates of Exiting Traffic, vph	119	80				
V/C ratio	0.10	0.07				
Control Delay, s/veh	3.7	3.4				
LOS	A	A				
95th % Queue (veh)	0	0				
95th % Queue (ft)	9	6				
Approach w/Bypass Delay, s/veh	3.9	3.8				
Approach w/Bypass LOS	A	A				

General & Site Information v 4.2									
Analyst:		Garrett Stinson							
Agency/Co:		GDOT							
Date:		12/17/2020							
Project or PI#:		0016350							
Year, Peak Hour:		2047 pm							
County/District:		Oconee/ District 1							
Intersection Name:		DIALS MILL RD. / SOUTH RAMP							
									
Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit Legs (TO)	N (1), vph	0		0		140		25	
	NE (2), vph								
	E (3), vph	15		0		15		0	
	SE (4), vph								
	S (5), vph	105		0		0		25	
	SW (6), vph								
	W (7), vph	0		0		0		0	
	NW (8), vph								
Output	Total Vehicles	120	0	0	0	155	0	50	0
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		93.0%	100.0%	93.0%	100.0%	93.0%	100.0%	93.0%	100.0%
% Heavy Vehicles		7.0%	0.0%	7.0%	0.0%	7.0%	0.0%	7.0%	0.0%
% Bicycle		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.88	0.95	0.88	0.95	0.88	0.95	0.88	0.95
F <sub>HV</sub>		0.935	1.000	1.000	1.000	0.935	1.000	0.935	1.000
F <sub>ped</sub>		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h		0	0	0	0	170	0	30	0
NE (2), pcu/h		0	0	0	0	0	0	0	0
E (3), pcu/h		18	0	0	0	18	0	0	0
SE (4), pcu/h		0	0	0	0	0	0	0	0
S (5), pcu/h		128	0	0	0	0	0	30	0
SW (6), pcu/h		0	0	0	0	0	0	0	0
W (7), pcu/h		0	0	0	0	0	0	0	0
NW (8), pcu/h		0	0	0	0	0	0	0	0
Entry flow, pcu/h		146	0	0	0	188	0	61	0
Conflicting flow, pcu/h		0	0	0	0	49	0	146	0

Results: Approach Measures of Effectiveness								
HCM 2010 Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	1056	NA	1130	NA	1006	NA	913	NA
Entry Flow Rates, vph	136	0	0	0	176	0	57	0
V/C ratio	0.13				0.18		0.06	
Control Delay, sec/pcu	4.6		3.2		5.2		4.5	
LOS	A		A		A		A	
Average Queue (ft)	4				6		2	
95th % Queue (ft)	12		0		17		5	
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	4.9		Int LOS	A		Max Approach V/C	0.18	

Notes:

v 4.2

## Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

 $F_{HV}$  = heavy vehicle factor

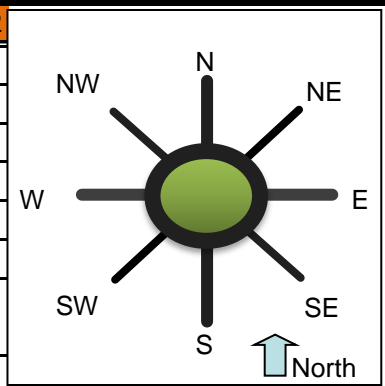
pcu = passenger car unit

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
$F_{HV}$						
$F_{ped}$						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 2010 Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						



**General & Site Information** v 4.2

Analyst: Garrett Stinson  
Agency/Co: GDOT  
Date: 12/17/2020  
Project or PI#: 0016350  
Year, Peak Hour: 2047 am peak  
County/District: Oconee/ District 1  
Intersection: DIALS MILL RD. / SOUTH RAMP  
Name: \_\_\_\_\_



Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit Legs (TO)	N (1), vph	0		0		140		25	
	NE (2), vph								
	E (3), vph	15		0		15		0	
	SE (4), vph								
	S (5), vph	105		0		0		25	
	SW (6), vph								
	W (7), vph	0		0		0		0	
	NW (8), vph								
Output	Total Vehicles	120	0	0	0	155	0	50	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	94.0%	100.0%	97.0%	100.0%	96.0%	100.0%	97.0%	100.0%
% Heavy Vehicles	6.0%	0.0%	3.0%	0.0%	4.0%	0.0%	3.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
F <sub>HV</sub>	0.943	1.000	1.000	1.000	0.962	1.000	0.971	1.000
F <sub>ped</sub>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	165	0	29	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	18	0	0	0	18	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	126	0	0	0	0	0	29	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	0	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	145	0	0	0	183	0	59	0
Conflicting flow, pcu/h	0	0	0	0	47	0	145	0

<b>Results: Approach Measures of Effectiveness</b>								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	1302	NA	1380	NA	1264	NA	1156	NA
Entry Flow Rates, vph	136	0	0	0	176	0	57	0
V/C ratio	0.10				0.14		0.05	
Control Delay, sec/pcu	3.6		2.6		4.0		3.5	
LOS	A		A		A		A	
Average Queue (ft)	3				5		1	
95th % Queue (ft)	9				13		4	
<b>Overall Intersection Measures of Effectiveness</b>								
Int Control Delay (sec)	3.8		Int LOS	A		Max Approach V/C	0.14	

Notes:

v 4.2

#### Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

 $F_{HV}$  = heavy vehicle factor

pcu = passenger car unit

<b>Bypass Lane Merge Point Analysis (if applicable)</b>						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	S (5)				
Select Exit Leg for Bypass (TO)	E (3)	E (3)				
Does the bypass have a dedicated receiving lane?	No	No				
<b>Volumes</b>						
Right Turn Volume removed from Entry Leg	105	70				
<b>Volume Characteristics (for entry leg)</b>						
PHF	0.88	0.88				
$F_{HV}$	0.94	0.96				
$F_{ped}$	1.00	1.00				
<b>NOTE: Volume Characteristics for Exit Leg are already taken into account</b>						
<b>Entry/Conflicting Flows</b>						
Entry Flow, pcu/hr	126	83				
Conflicting Flow, pcu/hr	36	36				
<b>Bypass Lane Results (HCM 6th Edition)</b>						
Entry Capacity of Bypass, vph	1255	1279				
Flow Rates of Exiting Traffic, vph	119	80				
V/C ratio	0.10	0.06				
Control Delay, s/veh	3.6	3.3				
LOS	A	A				
95th % Queue (veh)	0	0				
95th % Queue (ft)	8	5				
Approach w/Bypass Delay, s/veh	3.6	3.8				
Approach w/Bypass LOS	A	A				

## 7. ICE Report(s)



**Documentation:** A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

GDOT PI #	0007685 0013763	<p><b>Note:</b> Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2</p> <p>1. Does alternative address the project need in a balanced manner and in scale with the project?</p> <p>2. Does alternative improve safety performance in terms of reducing severe crashes?</p> <p>3. Does alternative incorporate safety, convenience operations (congestion, delay, reliability, etc.)?</p> <p>4. Does alternative improve (or preserve) traffic characteristics, constraints &amp; location context?</p> <p>5. Does alternative appear feasible given the site respect to other project factors?</p> <p>6. Overall feasible alternative (select alternative for further evaluation in Stage 2)?</p> <p><b>Screening Decision Justification:</b></p>							
Project Location:	Dials Mill Rd. @ North Ramp								
Existing Control:	Conventional (Minor Stop)								
Prepared by:	GDOT								
Date:	1/4/2021								
<p>Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column</p> <p><b>Intersection Alternative</b> (see "Intersections" tab for detailed description of intersection/interchange type)</p>									
Unsignalized Intersections	Conventional (Minor Stop)	Yes	No	No	Yes	Yes	Yes	Yes	Existing configuration
	Conventional (All-Way Stop)	Yes	Yes	No	No	Yes	No	No	lower price, interrupts traffic on mainline
	Mini Roundabout	Yes	Yes	No	No	Yes	Yes	No	safer, low intersection delay, high cost, speed too high
	Single Lane Roundabout	Yes	Yes	No	No	Yes	Yes	Yes	safer, low intersection delay, high cost. Potential alternative to evaluate
	Multilane Roundabout	Yes	Yes	No	No	Yes	Yes	Yes	safer, low intersection delay, high cost. Potential alternative to evaluate
	RCUT (stop control)	No	Yes	No	No	No	No	No	moderate cost, restricts left turning movements from the ramp
	RIRO w/down stream U-Turn	No	Yes	No	No	No	No	No	moderate cost, interrupts traffic on mainline
	High-T (unsignalized)	No	No	No	No	No	No	No	moderate cost, interrupts traffic on mainline
	Offset-T Intersections	No	No	No	No	No	No	No	not feasible with project area
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	not feasible with project area
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	not feasible with project area
	No LT Lane Improvements	No	No	No	No	No	No	No	not feasible with project area
	No RT Lane Improvements	No	No	No	No	No	No	No	not feasible with project area
	Other unsignalized (provide description):	No	No	No	No	No	No	No	not feasible with project area
Signalized Intersections	Traffic Signal	No	No	Yes	No	Yes	No	No	does not meet warrants
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	does not meet warrants
	RCUT (signalized)	No	No	No	No	No	No	No	does not meet warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	does not meet warrants
	Continuous Green-T	No	No	No	No	No	No	No	does not meet warrants
	Jughandle	No	No	No	No	No	No	No	does not meet warrants
	Quadrant Roadway	No	No	No	No	No	No	No	does not meet warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	does not meet warrants
	Diverging Diamond	No	No	No	No	No	No	No	does not meet warrants
	Single Point Interchange	No	No	No	No	No	No	No	does not meet warrants
	No LT Lane Improvements	No	No	No	No	No	No	No	does not meet warrants
	No RT Lane Improvements	No	No	No	No	No	No	No	does not meet warrants
	Other Signalized (provide description):	No	No	No	No	No	No	No	does not meet warrants

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record



## GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.15 | Revised 07/01/2019

GDOT PI # (or N/A) 0007685 0013763

GDOT District: 1 - Gainesville

Date: 1/4/2021

County: Oconee

Area Type: Rural

Agency/Firm: GDOT

Project Location: Dials Mill Rd. @ North Ramp

Analyst: Garrett Stinson

Existing Intersection Control: Conventional (Minor Stop)

Type of Analysis: Safety Funded Project

### Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	HCS 2010	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2027 Opening Yr No-Build Peak Hr Intersection Delay	2.0 sec	2.0 sec
2027 Opening Yr No-Build Peak Hr Intersection V/C	0.06	0.05
2047 Design Yr No-Build Peak Hr Intersection Delay	1.9 sec	1.9 sec
2047 Design Yr No-Build Peak Hr Intersection V/C ratio	0.07	0.07

Complete Streets  
Warrants Met?

- ☐ PEDESTRIANS  
☐ BICYCLES  
☐ TRANSIT

Crash Type

Crash Data: Enter most recent 5 years of crash data	Crash Severity			
	PDO	Injury Crash*	Fatal Crash*	
Angle	6	0	0	100%
Head-On	0	0	0	0%
Rear End	0	0	0	0%
Sideswipe - same	0	0	0	0%
Sideswipe - opposite	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0%
TOTALS:	6	0	0	6

\* Number of crashes resulting in injuries / fatalities, not number of persons

### Alternatives Analysis:

Proposed Control Type/Improvement:

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Conventional (Minor Stop)	Single Lane Roundabout	Multilane Roundabout	N/A	N/A

### Project Cost: (From CostEst Worksheet)

	Additional description here	Additional description here	Additional description here		
Construction Cost	\$450,000	\$1,498,000	\$2,426,000		
ROW Cost	\$0	\$271,766	\$357,788		
Environmental Cost	\$0	\$0	\$0		
Reimbursable Utility Cost	\$0	\$0	\$0		
Design & Contingency Cost	\$17,500	\$0	\$0		
Cost Adjustment (justification req'd)					
Total Cost	\$467,500	\$1,769,766	\$2,783,788		

### Traffic Operations:

	HCS 2010		GDOT RND Tool 4.1		GDOT RND Tool 4.1			
Traffic Analysis Software Used	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr		
Analysis Period								
2047 Design Yr Build Intersection Delay	2.0 sec	1.9 sec	4.1 sec	4.0 sec	8.4 sec	8.7 sec		
2047 Design Yr Build Intersection V/C	0.06	0.06	0.18	0.15	0.52	0.52		

### Safety Analysis:

Predefined CRF: PDO	0%	71%	32%		
Predefined CRF: Fatal/Inj	0%	87%	71%		
Predefined CRF Source:	N/A	FHWA Clearinghouse #s 233 / 230	FHWA Clearinghouse #s 236 / 237		
User Defined CRF: PDO	0%	0%	0%		
User Defined CRF: Fatal/Inj	0%	0%	0%		
User Defined CRF Source (write in if applicable):	0%	0%	0%		

### Environmental Impacts:<sup>1</sup>

Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	Minimal	Minimal		
Wetland	None	None	None		

Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet

<sup>1</sup> Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report

### Stakeholder Posture:

Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Neutral	Strong	Supportive		

### Final ICE Stage 2 Score: Rank of Control Type Alternatives:

6.1	5.1	3.4		
1	2	3		

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary):



## GDOT ICE TOOL: COST ESTIMATING AID

GDOT PI # (or N/A): 0007685 001 Request By:

County: Oconee GDOT District: 1 - Gainesville

Major (State) Road: Dials Mill Rd. Speed Limit: 45 mph

Minor (Crossing) ST: South Ramp Speed Limit: 45 mph

Major ST Direction: North/South Area Type: Rural

Intersection Control: Conventional (Minor Stop)

Prepared By: GDOT Analyst: Garrett Stinson

Date: 1/4/2021 Project ID:

Project Purpose:

2020 Existing Data Year  
2027 Project Opening Year  
2047 Project Design Year

## 2020 Existing Year Volumes

#DIV/O!				#DIV/O!			
(0)	(0)	(30)	(30)	(0)	(0)	(30)	(30)
0	0	45	45	0	0	45	45
2020 Intersection Daily Entering Volume (est): #DIV/O!				2020 Intersection Daily Entering Volume (est): #DIV/O!			
(25)	75	(0)	0	(0)	0	(0)	0
(0)	0	(30)	25	(0)	0	(30)	25
(0)	0	(0)	0	(0)	0	(0)	0
Peak Hour % Trucks				Peak Hour % Trucks			
EB	WB	NB	SB	EB	WB	NB	SB
7%	7%	7%	7%	7%	7%	7%	7%

## 2027 Opening Year Volumes

#DIV/O!				#DIV/O!			
(0)	(0)	(35)	(40)	(0)	(0)	(35)	(40)
0	0	50	50	0	0	50	50
2027 Intersection Daily Entering Volume (est): #DIV/O!				2027 Intersection Daily Entering Volume (est): #DIV/O!			
(35)	80	(0)	0	(0)	0	(0)	0
(0)	0	(35)	35	(0)	0	(35)	35
(0)	0	(0)	0	(0)	0	(0)	0
Peak Hour % Trucks				Peak Hour % Trucks			
EB	WB	NB	SB	EB	WB	NB	SB
7%	7%	7%	7%	7%	7%	7%	7%

## 2047 Design Year Volumes

#DIV/O!				#DIV/O!			
(0)	(0)	(45)	(45)	(0)	(0)	(45)	(45)
0	0	65	60	0	0	65	60
2047 Intersection Daily Entering Volume (est): #DIV/O!				2047 Intersection Daily Entering Volume (est): #DIV/O!			
(55)	110	(0)	0	(0)	0	(0)	0
(0)	0	(45)	50	(0)	0	(45)	50
(0)	0	(0)	0	(0)	0	(0)	0
Peak Hour % Trucks				Peak Hour % Trucks			
EB	WB	NB	SB	EB	WB	NB	SB
7%	7%	7%	7%	7%	7%	7%	7%

**Introduction:** In 2005, SAFETEA-LU established the Highway Safety Improvement Program (HSIP) and mandated that each state prepare a Strategic Highway Safety Plan (SHSP) to prioritize safety funding investments. Intersections quickly became a common component of most states' SHSP emphasis areas and HSIP project lists, including Georgia's SHSP. Intersection Control Evaluation (ICE) policies and procedures represent a traceable and transparent procedure to streamline the evaluation of intersection control alternatives, and further leverage safety advancements for intersection improvements beyond just the safety program. Approximately one-third of all traffic fatalities and roughly seventy five percent of all traffic crashes in Georgia occur at or adjacent to intersections. Accordingly, the Georgia SHSP includes an emphasis on enhancing intersection safety to advance the *Toward Zero Deaths* vision embraced by the Georgia Governor's Office of Highway Safety (GOHS). This ICE tool was developed to support the ICE policy, developed and adopted to help ensure that intersection investments across the entire Georgia highway system are selected, prioritized and implemented with defensible benefits for safety towards those ends.

**Tool Goal:** The goal of this ICE tool is to provide a simplified and consistent way of importing traffic, safety, cost, environmental impact and stakeholder posture data to assess and quantify intersection control improvement benefits. The tool supports the ICE policy and procedures to provide traceability, transparency, consistency and accountability when identifying and selecting an intersection control solution that both meets project purpose and reflects overall best value in terms of specific performance-based criteria.

**Requirements:** An ICE is required for any intersection improvement (e.g. new or modified intersection, widening/reconstruction or corridor project, or work accomplished through a driveway or encroachment permit that affects an intersection) where: **1)** the intersection includes at least one roadway designated as a State Route (State Highway System) or as part of the National Highway System; or **2)** the intersection will be designed or constructed using State or Federal funding. In certain circumstances where an ICE would otherwise be required, the requirement may be waived based on appropriate evidence presented with a written request. (See the "Waiver" tab to review criteria that may make a project waiver eligible and for instructions to submit a waiver request to the Department). An ICE is not required when the proposed work does not include any changes to the intersection design, involves only routine traffic signal timing and equipment maintenance, or for driveway permits where the driveway is not a new leg to an already existing intersection on either 1) a divided, multi-lane highway with a closed median and only right-in/right-out access or 2) an undivided roadway where the development is not required to construct left and/or right turn lanes (as per the Driveway Manual and District Traffic Engineer).

**Two-Stage Process:** A complete ICE process consists of two (2) distinct stages, and it is expected that the respective level of effort for completing both stages of ICE will correspond to the magnitude and complexity of the intersection. Prior to starting an ICE, the District Traffic Engineer and/or State Traffic Engineer should be consulted for advice on an appropriate level of effort. The Stage 1 and Stage 2 ICE forms are designed minimize required data inputs using drop-down menu choices and limiting text entry. All fields shaded grey include drop down menu choices and all fields shaded blue require data entry. All other cells in the worksheet are locked.

**Stage 1: Screening Decision Record** Stage 1 should be conducted early in the project development process and is intended to inform which alternatives are worthy of further evaluation in Stage 2. Stage 1 serves as a screening effort meant to *eliminate* non-competitive options and identify which alternatives merit further considerations based on their practical feasibility. Users should use good engineering judgement in responding to the seven policy questions by selecting "Yes" or "No" in the drop-down boxes. Alternatives should not be summarily eliminated without due consideration, and reasons for eliminating or advancing an alternative should be documented in the "Screening Decision Justification" column.

**Stage 2: Alternative Selection Decision Record** Stage 2 involves a more detailed and familiar evaluation of the alternatives identified in Stage 1 in order to support the selection of a preferred alternative that may be advanced to detailed design. Stage 2 data entry may require the use of external analysis tools to determine costs, operations and/or safety data that, combined with environmental and stakeholder posture data, form the basis of the ICE evaluation. A separate "CostEst" worksheet tab helps users develop pre-planning-level cost estimates for each Stage 2 alternative evaluated, and a separate Users Guide has been prepared to give guidance on Stage 1 and Stage 2 data entry. Once all data is entered, each alternative is scored and ranked, with the results reported at the bottom of the Stage 2 worksheet to inform on the best of the intersection controls evaluated for project recommendation.

**Documentation:** A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

GDOT PI #	0007685 0013763	<p><b>Note:</b> Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2</p> <p>1. Does alternative address the project need in a balanced manner and in scale with the project?</p> <p>2. Does alternative improve safety performance in terms of reducing severe crashes?</p> <p>3. Does alternative incorporate safety, convenience operations (congestion, delay, reliability, etc.)?</p> <p>4. Does alternative improve (or preserve) traffic characteristics, constraints &amp; location context?</p> <p>5. Does alternative appear feasible given the site respect to other project factors?</p> <p>6. Overall feasible alternative (select alternative for further evaluation in Stage 2)?</p> <p><b>Screening Decision Justification:</b></p>							
Project Location:	Dials Mill Rd. @ South Ramp								
Existing Control:	Conventional (Minor Stop)								
Prepared by:	GDOT								
Date:	1/4/2021								
<p>Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column</p> <p><b>Intersection Alternative</b> (see "Intersections" tab for detailed description of intersection/interchange type)</p>									
Unsignalized Intersections	Conventional (Minor Stop)	Yes	No	No	Yes	Yes	Yes	Yes	Existing configuration
	Conventional (All-Way Stop)	Yes	Yes	No	No	Yes	No	No	lower price, interrupts traffic on mainline
	Mini Roundabout	Yes	Yes	No	No	Yes	Yes	No	safer, low intersection delay, high cost, speed too high
	Single Lane Roundabout	Yes	Yes	No	No	Yes	Yes	Yes	safer, low intersection delay, high cost. Potential alternative to evaluate
	Multilane Roundabout	Yes	Yes	No	No	Yes	Yes	Yes	safer, low intersection delay, high cost. Potential alternative to evaluate
	RCUT (stop control)	No	Yes	No	No	No	No	No	moderate cost, restricts left turning movements from the ramp
	RIRO w/down stream U-Turn	No	Yes	No	No	No	No	No	moderate cost, interrupts traffic on mainline
	High-T (unsignalized)	No	No	No	No	No	No	No	moderate cost, interrupts traffic on mainline
	Offset-T Intersections	No	No	No	No	No	No	No	not feasible with project area
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	not feasible with project area
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	not feasible with project area
	No LT Lane Improvements	No	No	No	No	No	No	No	not feasible with project area
	No RT Lane Improvements	No	No	No	No	No	No	No	not feasible with project area
	Other unsignalized (provide description):	No	No	No	No	No	No	No	not feasible with project area
Signalized Intersections	Traffic Signal	No	No	Yes	No	Yes	No	No	does not meet warrants
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	does not meet warrants
	RCUT (signalized)	No	No	No	No	No	No	No	does not meet warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	does not meet warrants
	Continuous Green-T	No	No	No	No	No	No	No	does not meet warrants
	Jughandle	No	No	No	No	No	No	No	does not meet warrants
	Quadrant Roadway	No	No	No	No	No	No	No	does not meet warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	does not meet warrants
	Diverging Diamond	No	No	No	No	No	No	No	does not meet warrants
	Single Point Interchange	No	No	No	No	No	No	No	does not meet warrants
	No LT Lane Improvements	No	No	No	No	No	No	No	does not meet warrants
	No RT Lane Improvements	No	No	No	No	No	No	No	does not meet warrants
	Other Signalized (provide description):	No	No	No	No	No	No	No	does not meet warrants

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record



## GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.15 | Revised 07/01/2019

GDOT PI # (or N/A) 0007685 0013763

GDOT District: 1 - Gainesville

Date: 1/4/2021

County: Oconee

Area Type: Rural

Agency/Firm: GDOT

Project Location: Dials Mill Rd. @ South Ramp

Analyst: Garrett Stinson

Existing Intersection Control: Conventional (Minor Stop)

Type of Analysis: Safety Funded Project

### Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	HCS 2010	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2027 Opening Yr No-Build Peak Hr Intersection Delay	2.0 sec	2.0 sec
2027 Opening Yr No-Build Peak Hr Intersection V/C	0.06	0.05
2047 Design Yr No-Build Peak Hr Intersection Delay	1.9 sec	1.9 sec
2047 Design Yr No-Build Peak Hr Intersection V/C ratio	0.07	0.07

Complete Streets  
Warrants Met?

- ☐ PEDESTRIANS  
☐ BICYCLES  
☐ TRANSIT

Crash Type

Crash Data: Enter most recent 5 years of crash data	Crash Severity			
	PDO	Injury Crash*	Fatal Crash*	
Angle	6	0	0	100%
Head-On	0	0	0	0%
Rear End	0	0	0	0%
Sideswipe - same	0	0	0	0%
Sideswipe - opposite	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0%
TOTALS:	6	0	0	6

\* Number of crashes resulting in injuries / fatalities, not number of persons

### Alternatives Analysis:

Proposed Control Type/Improvement:

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Conventional (Minor Stop)	Single Lane Roundabout	Multilane Roundabout	N/A	N/A

### Project Cost: (From CostEst Worksheet)

	Additional description here	Additional description here	Additional description here		
Construction Cost	\$450,000	\$1,498,000	\$2,426,000		
ROW Cost	\$0	\$271,766	\$357,788		
Environmental Cost	\$0	\$0	\$0		
Reimbursable Utility Cost	\$0	\$0	\$0		
Design & Contingency Cost	\$17,500	\$0	\$0		
Cost Adjustment (justification req'd)					
Total Cost	\$467,500	\$1,769,766	\$2,783,788		

### Traffic Operations:

	HCS 2010		GDOT RND Tool 4.1		GDOT RND Tool 4.1			
Traffic Analysis Software Used	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr		
Analysis Period								
2047 Design Yr Build Intersection Delay	2.0 sec	2.0 sec	4.0 sec	4.9 sec	9.1 sec	9.0 sec		
2047 Design Yr Build Intersection V/C	0.06	0.05	0.15	0.18	0.55	0.54		

### Safety Analysis:

Predefined CRF: PDO	0%	71%	32%		
Predefined CRF: Fatal/Inj	0%	87%	71%		
Predefined CRF Source:	N/A	FHWA Clearinghouse #s 233 / 230	FHWA Clearinghouse #s 236 / 237		
User Defined CRF: PDO	0%	0%	0%		
User Defined CRF: Fatal/Inj	0%	0%	0%		
User Defined CRF Source (write in if applicable):	0%	0%	0%		

### Environmental Impacts:<sup>1</sup>

Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	Minimal	Minimal		
Wetland	None	None	None		

Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet

<sup>1</sup> Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report

### Stakeholder Posture:

Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Neutral	Strong	Supportive		

<b>Final ICE Stage 2 Score:</b>	6.1	5.1	3.3		
Rank of Control Type Alternatives:	1	2	3		

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary):





## 8. MS4 Concept Report Summary



**MS4 CONCEPT REPORT SUMMARY**

GDOT PI Number:	0013763	Submittal Date:	4/23/2021
Project Name:	SR 8/SR 316/US 29 @ CR 60/DIALS MILL ROAD Grade	Project Let Date:	6/15/2024
Coordinates:	33.9425 -83.5629	Agency/Company:	Roadway Design
County:	Oconee County, GA	Contact Person:	- contact person -
GDOT District:	District 1	Contact Phone:	(XXX) XXX-XXXX

HSGs: ☒ A ☐ B ☒ C ☐ D

Notes: Grade Separation

Milestone Submittal: ☒ Concept ☐ PFPR ☐ FFPR ☐ Addendum
**MS4 Post-Construction Exclusions**
Is there a Project Level Exclusion (PLE) that applies to this project? ☐ Yes ☒ No

If yes, please indicate which of the following exclusions apply:

- ☐ PLE 1: Roadway not owned or operated by GDOT
- ☐ PLE 2: Project location not within a designated MS4 area
- ☐ PLE 3: Maintenance and safety project (multiple unconnected sites disturbing < 1 ac)
- ☐ PLE 4: Project with environmental documents approved or R/W plans submitted on or before 1/30/2012
- ☐ PLE 5: Road project disturbing < 1 ac or for site development project adding < 5,000 ft<sup>2</sup> of impervious area
- ☐ PLE 6: Projects in MS4 areas added to the 2017 MS4 permit with concept approval before 1/3/2018

*Note: At a minimum, this MS4 Concept Report Summary must be submitted with the Concept Report. If the project does not have a PLE, it is recommended that this Tool be used to estimate sizing of potential post-construction stormwater BMPs. It is understood, however, that the level of detail known about the project can vary at this stage of design and the information will likely be approximate. Therefore, the delineation of basins and estimation of sizing of post-construction stormwater BMPs is to be completed at the discretion of the Project Engineer. If basins are delineated and sizing of post-construction stormwater BMPs are completed, submit a drainage basin map(s) and a summary table of the proposed post-construction stormwater BMPs (Attachment B). Outfall level exclusions and infeasibilities are not applied at this time unless the designer is 100% certain they will apply in final design.*

**Discharge Information**

Y | N

☐ ☒ Does the project discharge to a trout stream?

☐ ☐

**Disclaimer:** This tool provided for information only and is intended to assist the designer in filling out Georgia Department of Transportation's MS4 Post-Construction Stormwater Report. This tool is being provided without warranty or liability of any kind to the Department. All liability resides with the user of the tool. The Department's Manual on Drainage Design for Highways shall be used in design of post-construction structures.

## MS4 Concept Report Summary

Attach the following checklist information to the Concept Report Template:

- Is there a Project Level Exclusion that applies to this project: ☒ No ☐ Yes
- If yes, please indicate which of the following exclusions apply:
- ☐ Roadways that are not owned or operated (maintained) by GDOT may not require post-construction BMPs. Coordinate with the appropriate local government or entity to determine stormwater management requirements.
  - ☐ The project location is not within a designated MS4 area.
  - ☐ Maintenance and safety improvement projects whereby the sites are not connected and disturbs less than one acre at each individual site. This includes projects such as repaving, shoulder building, fiber optic line installation, sign addition, and sound barrier installation.
  - ☐ Projects that have their environmental documents approved or right-of-way plans submitted for approval on or before June 30th, 2012.
  - ☐ Road projects that disturb less than 1 acre or for site development projects that add less than 5,000 ft<sup>2</sup> of impervious area.

*If the project has a Project Level Exclusion nothing further is needed.*

*If the project does not have a Project Level Exclusion use the MS4 Concept Level Design Spreadsheet to estimate the treatment volumes and flow rates, size the BMP's, complete the tables below, and include as an attachment to the Concept Report. Add additional rows, if necessary. It is understood that this information will be approximate based on available information at the time of the concept.*

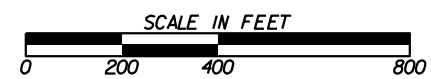
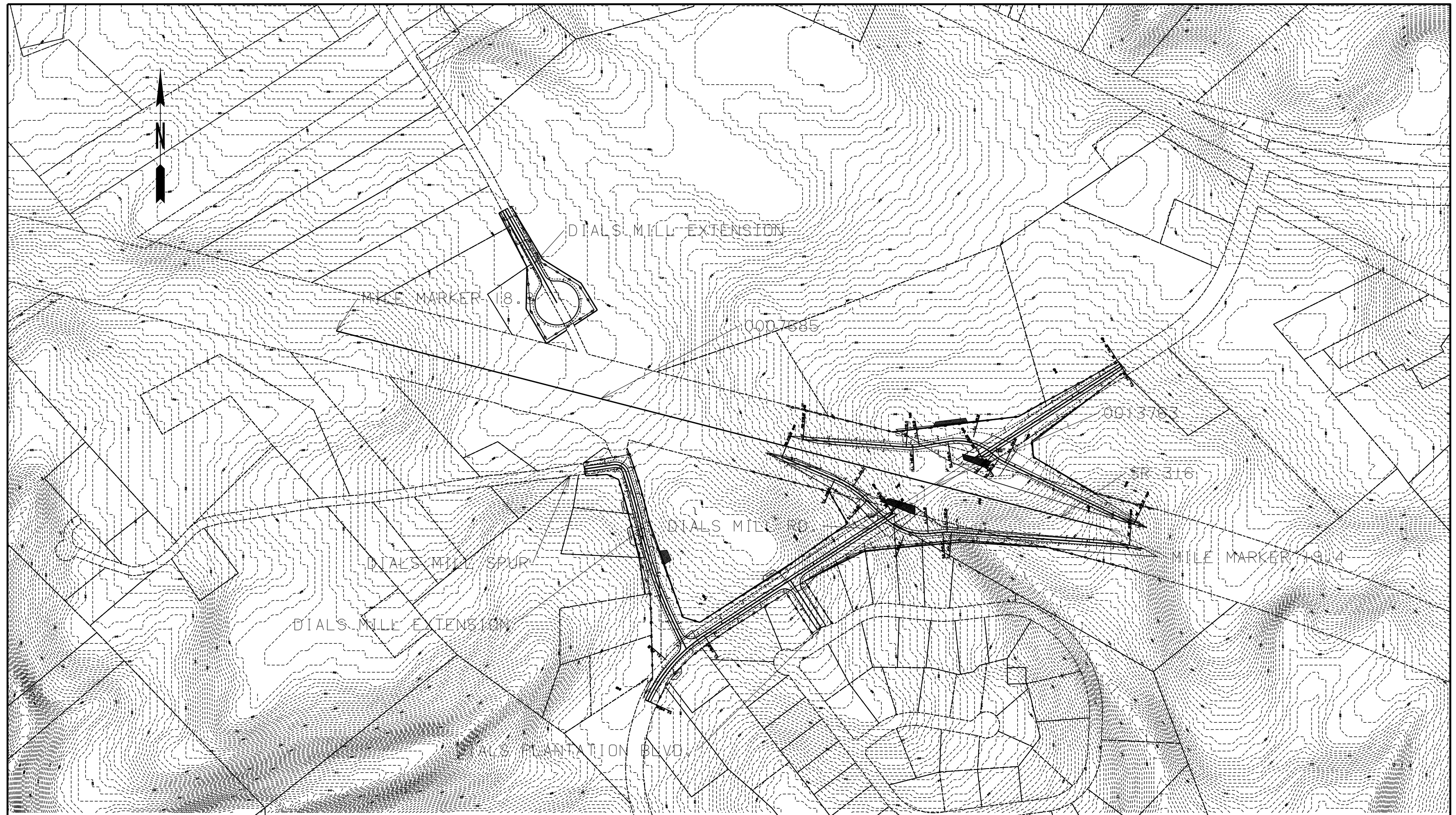
*In MS4 designated areas, water quantity requirements may be waived for drainage areas that flow directly into surface waters that have a drainage area greater than 5 square miles.*

Drainage Area Summary									
Outfall Area	Pre-Development			Post-Development			Water Quality Volume (Cubic Feet)	Channel Protection Volume (Cubic Feet)	Required Detention Volume (Cubic Feet)
	Tc	Weighted CN	Area (Acres)	Tc	Weighted CN	Area (Acres)			
1	5	73.4	5.01	5	76.8	5.65	3700	n/a	n/a
2	9	67.5	4.38	9	69.4	5.23	2746		

BMP Selection and Feasibility Summary						
	Outfall Level Exclusion?		BMP Selected	Is the BMP Feasible?		
	Y/N	Exclusion No.		Y/N	Infeasibility Criteria No.	<sup>1</sup> Feasibility of an Infiltration BMP
Outfall Area						
1	N	N/A	Filter Strip	Y		Y
2	N	N/A	Sand Filter	Y		Y

<sup>1</sup> - For outfall areas considering an infiltration BMP indicate if an infiltration BMP is well-suited, potentially suitable, has limited suitability, or is unsuitable for the outfall area.

*In addition to the above charts, attach the Drainage Area Map, drainage basin summary spreadsheets, and cost estimates (if required) to the Concept Report. For outfall areas considering an infiltration BMP, attach Worksheet J-1. See Appendix J of the GDOT Drainage Design for Highways Manual (Drainage Manual).*



DRAINAGE AREA MAP  
0013763 & 0007685

## 9. Minutes of Concept Meetings

# CONCEPT TEAM MEETING MINUTES



GDOT PM Jonathan DiGioia  
PI No. 0007685 & 0013763

**Date:** May 20, 2021

**Meeting Location:** ☐ Email ☒ Telephone/MS Teams ☐ Physical Meeting

**Attendees:**

Name	Organization/Office
Clay Johnson	AT&T
Christopher Bates	Comcast
Evan Moshonisiotis	Fiberlight LLC
Donn Digamon	GDOT Bridge
Troy Tucker	GDOT D1 A2 Construction
Harold Mull	GDOT D1 Construction
SueAnne Decker	GDOT D1 Preconstruction
Jonathan Dills	GDOT D1 ROW
Jason Dykes	GDOT D1 Traffic Ops
Parker Niebauer	GDOT D1 Traffic Ops
Robby Oliver	GDOT D1 Utilities
Brian Sherman	GDOT OES Air/Noise
Anne Sexton-Paperno	GDOT OES Ecology
Sam Carter	GDOT OES History
Valerie Masutier	GDOT OES NEPA
Bryan Lott	GDOT OPD
Cleopatra James	GDOT OPD
Courtney Cedor	GDOT OPD
Jonathan Digioia	GDOT OPD
Krystal Stovall-Dixon	GDOT OPD
Randi Hooker	GDOT OPD
Elizabeth Davis	GDOT Planning
Jalen Ford	GDOT Planning
Kimberly Grayson	GDOT Planning
Andy Casey	GDOT Roadway Design
Garrett Stinson	GDOT Roadway Design
Marvin Gavins	GDOT Roadway Design
Theresa Holder	GDOT Roadway Design
Kevin York	GDOT ROW
Andrew Pearson	GDOT Traffic Ops
Christopher Raymond	GDOT Traffic Ops
Daniel Tilden	Georgia Power

Name	Organization/Office
Jody Woodall	Oconee Public Works (Director)
Steven DeGrave	SDT Telecom
Seth Baker	Southern Co Gas/AGL
James Childs	Walton EMC

**I. Introduction**

- a. This concept team meeting (CTM) followed the standard GDOT Office of Program Delivery (OPD) format for CTM's. When the CTM invitation went out, it requested all subject matter experts (SME's) to provide questions, comments, or concerns no later than three days prior to the meeting in order to allow the design team to respond and ensure inclusion in the meeting minutes. All comments received prior to the meeting are included as attachments to the minutes.
- b. Jonathan DiGioia introduced the meeting and facilitated introduction of all attendees present via Microsoft Teams and/or telephone

**II. Concept Presentation**

- a. Garrett Stinson gave a PowerPoint presentation highlighting the project concept and key components of the draft concept report

**III. Discussion/Q&A**

- **Donn Digamon:** Does typical section under bridge match typical section at SR 316 @ SR 81 bridge? Suggest using this as reference point. See PI's 0008430 and 0008431 for reference.
- **Harold Mull:** Slope paving may be required under bridge. Need 6" slope paving under bridges, 4" concrete in ditch.
- **Chris Raymond:** Where are you with the intersection control evaluation (ICE)?
- **Garrett Stinson:** Completed ICE analysis, sent to GDOT Traffic Ops to review.
- **Harold Mull:** There may be concerns from stakeholders and members of the public about cutting off Dials Mill Extension and removing access to SR 316.
- **Beth Davis:** Already received a letter from a Bogart councilmember with concerns about removing access to sideroads along SR 316.
- **SueAnne Decker:** If any overpass-only bridges are constructed, consider using flat bridge profiles instead of arched profiles in case of future interchange conversion—this makes it much easier to achieve sight distance requirements at ramp terminals compared with arched bridge profiles.
- **Harold Mull:** For reference, most of the bridges along SR 316 have MSE walls instead of slopes
- **Seth Baker (Southern Co/AGL):** AGL has a gas main renewal project starting "fairly soon" for a main south of SR 316 at Dials Mill Rd that runs along Dials Mill and appears to overlap with the project area. AGL would like to coordinate their renewal project with

this one to avoid having to relocate brand new facilities for GDOT to construct the project. AGL also has a regulator station in the project area (not planned for renewal as part of the gas main renewal project). Where does GDOT anticipate needing to acquire right-of-way (ROW) within the large triangular parcel south of SR 316?

- **Garrett Stinson:** Anticipate acquiring ROW on the corner and along the southeast edge of the parcel.
- **Robby Oliver:** GDOT needs to permit the gas main upgrades even if they are in county ROW due to overlapping with an active GDOT project. GDOT can take steps to help coordinate new line moving.
- **Seth Baker:** Even if AGL knows the required ROW areas for the project, they cannot relocate their facilities into ROW that hasn't been acquired yet. AGL project extends south along Dials Mill Road beyond the GDOT project limits. How far south do GDOT's project limits extend?
- **Garrett Stinson** showed a concept layout.
- **Robby Oliver:** GDOT can see about permitting deeper lines.
- **Jonathan DiGioia:** Wanted to confirm that the concept utility report recommends SUE Level B.
- **Robby Oliver:** Yes, need to go through GDOT SSUE to request SUE level B. The concept utility report does not specifically mention the AGL gas line upgrades in the area, because they were not known when it was being written.
- **Harold Mull:** If gas line is moved after SUE investigation, the SUE will need to be updated after the fact.
- **Cleopatra James:** Can AGL provide plans of where their new facilities are proposed to go?
- **Seth Baker:** Will see about providing more information about AGL's project (drawings, etc.). DGN files are not available currently.
- **Garrett Stinson:** Wanted clarity about Harold's written comment about adding cable barrier in median.
- **Harold Mull:** There is an ongoing/recent project to add cable barrier in the median along SR 316, but it skips a few areas where the intersections were closely spaced. This project may need to add/tie in cable barrier beyond its "ordinary" project limits. Keep this in mind in terms of environmental survey area, etc.
- **Seth Baker:** Can AGL's project be listed for reference in the concept report?
- **Cleopatra James:** Even though we haven't received any plans yet, we can at least note for reference about the gas main upgrades overlapping the GDOT project area.
- **SueAnne Decker:** Add a comment about needing a utility permit for the gas main upgrade in concept report. Make sure it's represented in both "other projects" and Utilities section of the report. This is unique because it's on a local road, but it will need to be permitted since it is a DOT project.



- **Cleopatra James:** Gave a reminder about concept submission schedule and importance of submitting comments early to avoid delays submitting or reviewing.
- **Harold Mull:** When PIOH comes, there may be concerns about cul-de-sac and long trip times to cross/access SR 316 from Dials Mill Extension. The layout sketch provided by the district office addressed these concerns. In the concept report, need to clarify how Alt 3 addresses these issues or else add a 4<sup>th</sup> alternative describing the layout suggested by the district office.
- **Jonathan Dills:** According to property records, the parcel shown as a potential displacement may be historic. Suggest checking on this and being aware if not already known.
- **Jonathan DiGioia:** Designer can check PTIP info and desktop environmental screening results to verify if this is an anticipated risk.

**Action items:**

1. **Seth Baker** find out where AGL is with permitting gas main upgrade; send plans to GDOT PM and GDOT utility coordinator when available
2. **Jonathan DiGioia** request SUE level B from SSUE office
3. **Roadway Design** finalize concept report and submit to PM for review by 6/18 per BL schedule

**Attachments:**

1. Presentation slides
2. Comments emailed prior to meeting
  - a. Harold Mull, GDOT D1 Construction



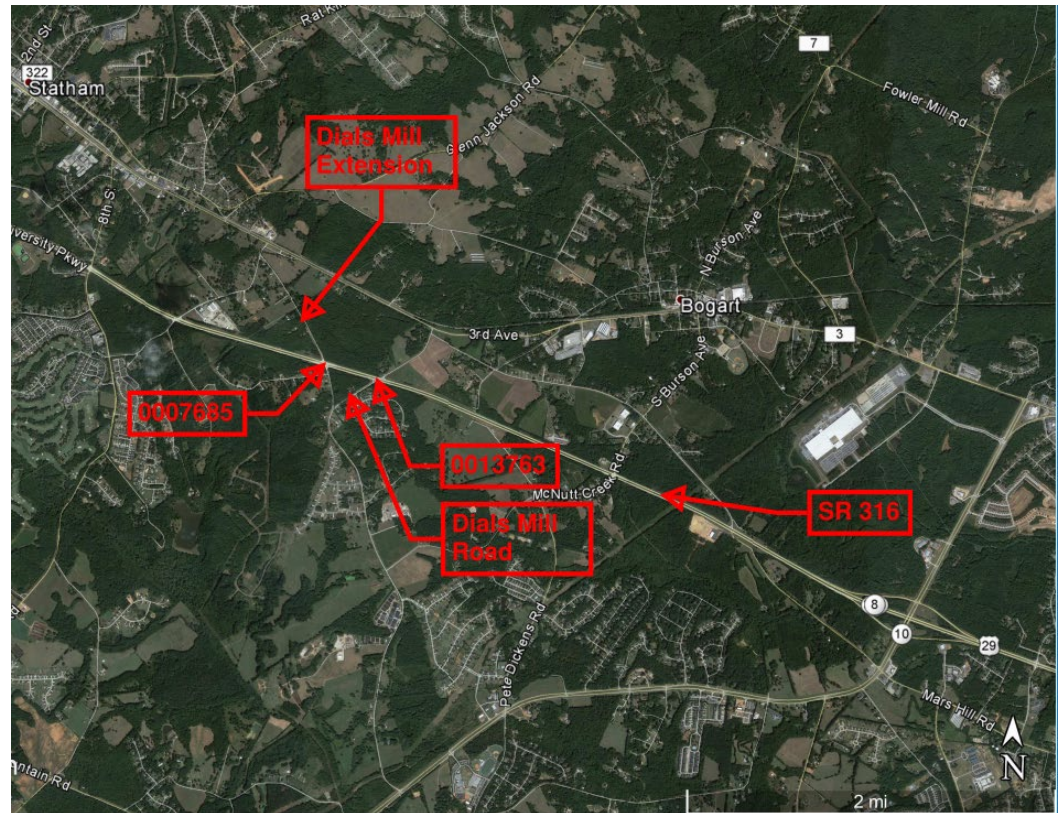
**0007685: SR 316 @ CR 58/DIALS MILL EXT.  
0013763: SR 316 @ CR 60/DIALS MILL ROAD**

**Oconee County  
Concept Team Meeting  
May 20, 2021**

## Project Background

### Project Location

- 0007685: This project is located at the intersection of SR 316 and CR 58/Dials Mill Ext
- 0013763: This project is located at the intersection of SR 316 and CR60/Dials Mill Rd.
- Located approximately 15 miles southwest of the city of Athens, GA.
- Congressional District: 10



## Project Justification

### Purpose:

- The purpose of this project is to improve connectivity between Atlanta and Athens Metropolitan areas. Also this project will aid in congestion relief by removing turning lanes and crossing maneuvers of side roads. This project is a safety improvement project due to eliminating crossing maneuvers across SR 316, aiding in crash reduction.
- The proposed grade separation at this location is needed to improve connectivity, accommodate expected growth in traffic volumes, and enhance operational traffic conditions in the proposed project area.

### Need:

- 14 crashes between Feb. 2015 and Feb. 2021 causing 14 injuries and no fatalities within the both project areas.
- Angle Collisions—8
- Rear End Collisions—0
- Sideswipe—2
- Head On Collisions—1
- Single Vehicle Crashes—3

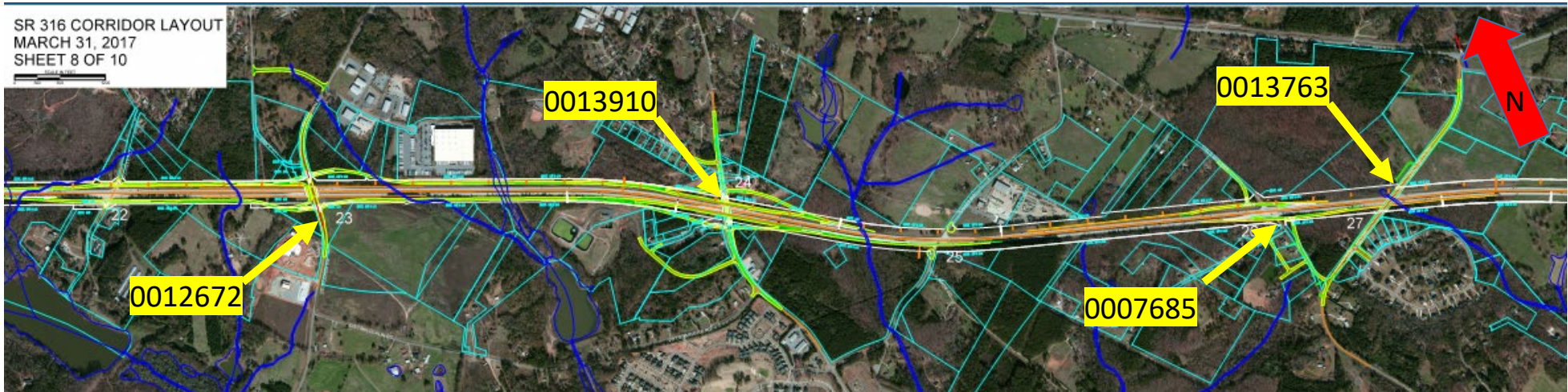
## Existing Conditions

- SR 316 is a four-lane depressed 44-foot median divided roadway with 12-foot travel lanes, graded shoulders, and open drainage ditches. SR 316 is functionally classified as a principal arterial and has a posted speed of 65-mph. Exist ROW width is 330 feet.
- Dials Mill Ext. is a two-lane roadway with 12-foot travel lanes, graded shoulders, and open drainage ditches. Dials Mill Ext. is functionally classified as a local road and has a posted speed of 45-mph. Exist ROW width is 50 feet. Dials Mill Ext. intersects SR 316 with an at grade intersection. The intersection angle is  $56^{\circ}$ , which is below the minimum of  $75^{\circ}$ .
- Dials Mill Rd. is a two-lane roadway with 12-foot travel lanes, graded shoulders, and open drainage ditches. Dials Mill Rd. is functionally classified as a local road and has a posted speed of 45-mph. Exist ROW width is 80 feet. Dials Mill Rd. intersects SR 316 with an at grade intersection. The intersection angle is  $47^{\circ}$ , which is below the minimum of  $75^{\circ}$ .

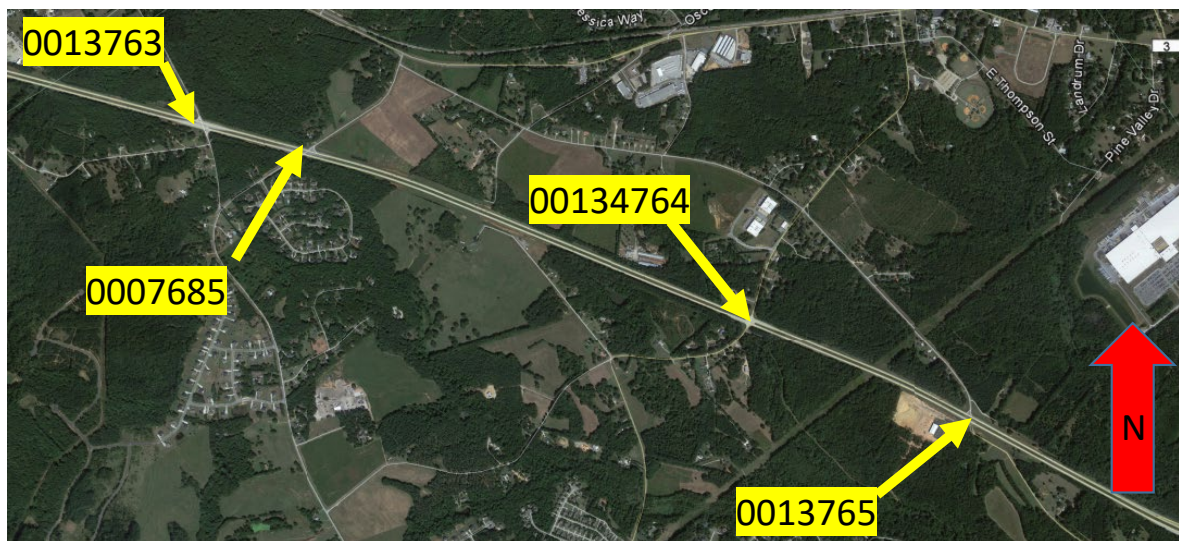


## Projects in the Area

- There are other projects in design in this area along the SR 316 corridor. Coordination of let dates/begin construction dates may be necessary.



## Projects in the Area





## Traffic Projection

### AADT

#### SR 316

- Current Year = 30,150
- Open Year = 36,002
- Design Year = 49,322
- 24 Hr. Truck = 19%

#### Dials Mill Ext.

- Current Year = 825
- Open Year = 975
- Design Year = 1350
- 24 Hr. Truck = 7%

#### Dials Mill Rd.

- Current Year = 1,525
- Open Year = 1,900
- Design Year = 2,600
- 24 Hr. Truck = 7%

Traffic Projection approved on 11/2/2020.

## Design Parameters

### SR 316 – *Principal Arterial*

Feature	Proposed
Design Speed	65 MPH
Current Posted Speed	65 MPH
Design Vehicle/Check Vehicle	WB-67
Lane Width	12 ft
Median Width	44' Depressed
Outside Shoulder Width	12 ft (10 ft paved)
Outside Shoulder Slope	Urban = 2% and Rural = 6%
Maximum Grade	6%
Pavement Type	Asphalt

## Design Parameters

### Dials Mill Ext.— *Local Road*

Feature	Proposed
Design Speed	45 MPH
Current Posted Speed	45 MPH
Design Vehicle/Check Vehicle	S-BUS36
Lane Width	12 ft
Median Width	N/A
Outside Shoulder Width	8 ft (2 ft paved)
Outside Shoulder Slope	Rural = 6%
Maximum Grade	9%
Pavement Type	Asphalt

## Design Parameters

### Dials Mill Rd.— *Local Road*

Feature	Proposed
Design Speed	45 MPH
Current Posted Speed	45 MPH
Design Vehicle/Check Vehicle	S-BUS36
Lane Width	12 ft
Median Width	N/A
Outside Shoulder Width	8 ft (2 ft paved)
Outside Shoulder Slope	Rural = 6%
Maximum Grade	9%
Pavement Type	Asphalt

## Concept Layout



● Displacement



## Concept Layout – Cul-de-sac

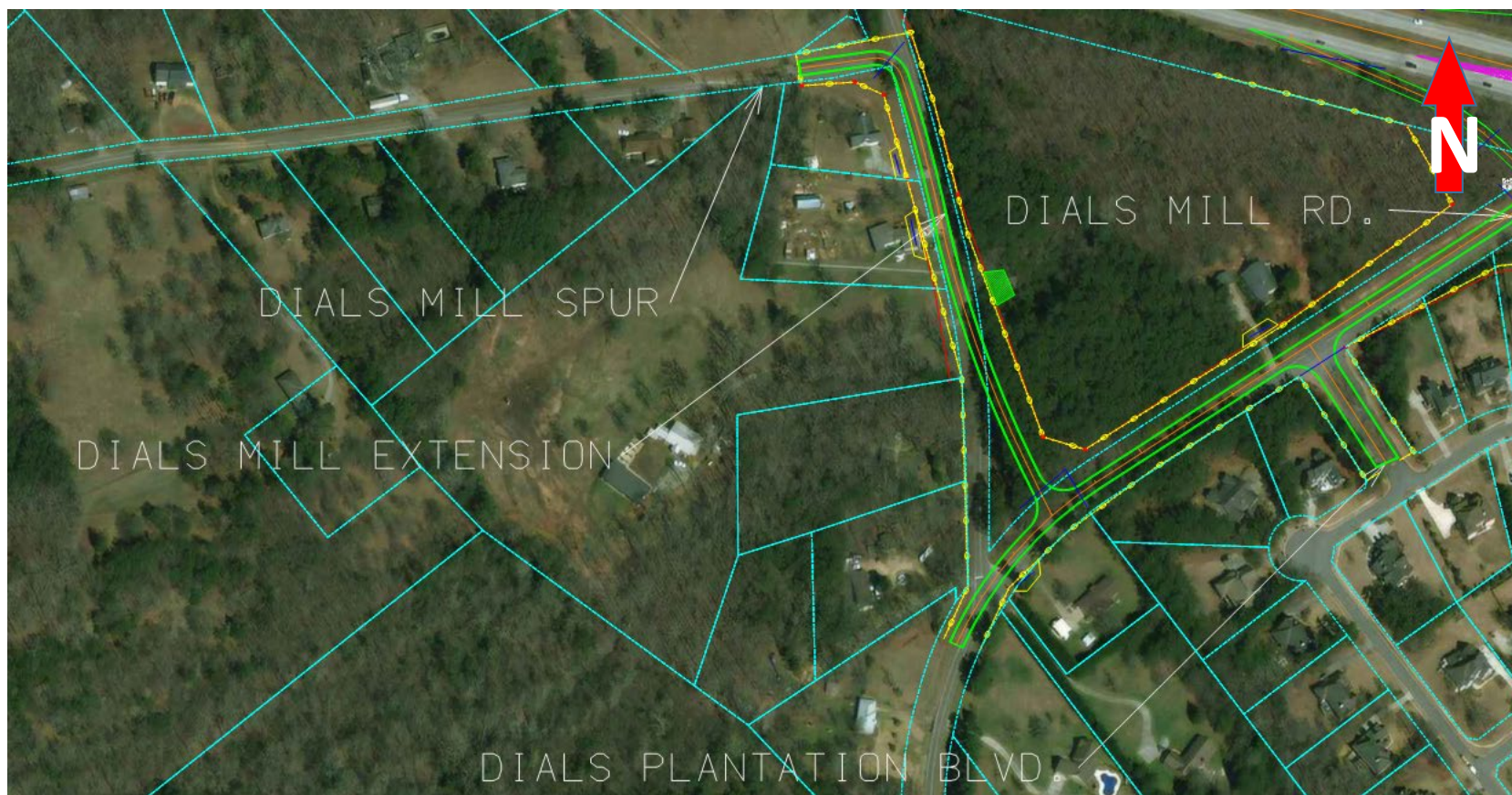




## Concept Layout - Interchange



## Concept Layout – Intersection Dials Mill Rd. & Ext.





## Proposed Improvements

### Project

- Propose combining both projects into one project.

### 0007685

- Close existing Dials Mill Ext. at SR 316 intersection.
  - Construct cul-de-sac North of SR 316.
  - Divert Dials Mill Ext. onto Dials Mill Spur south of SR 316.
- Realign Dials Mill Ext. (South) to intersect Dials Mill Rd. at roughly 90°
- Close existing median break on SR 316.

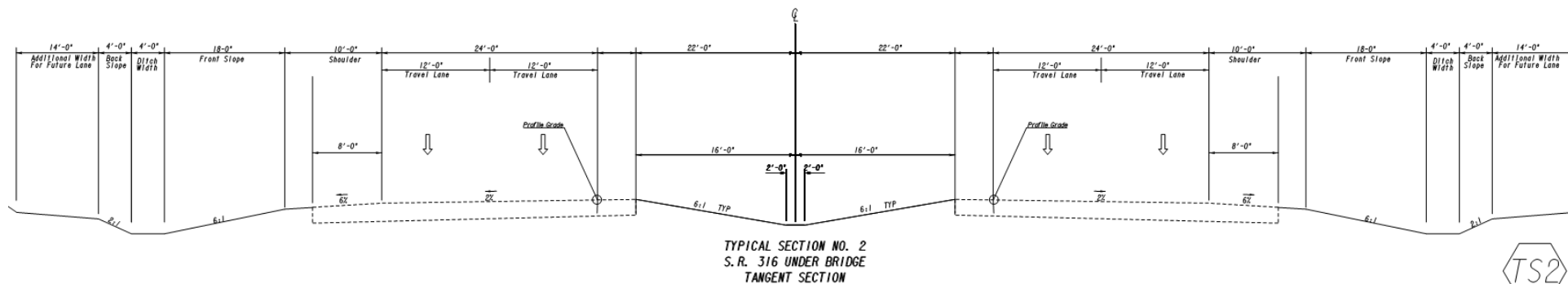
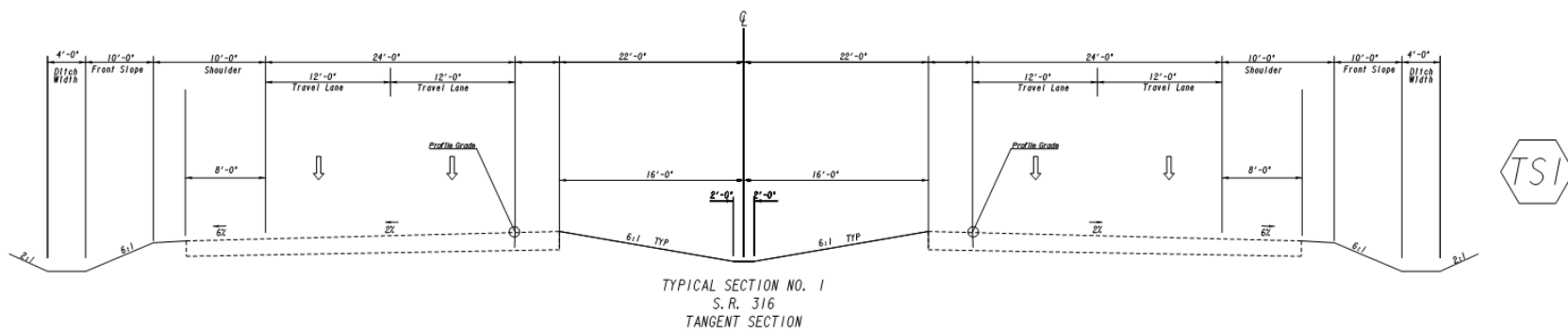
### 0013763

- Replace existing at grade intersection with grade separated diamond interchange.

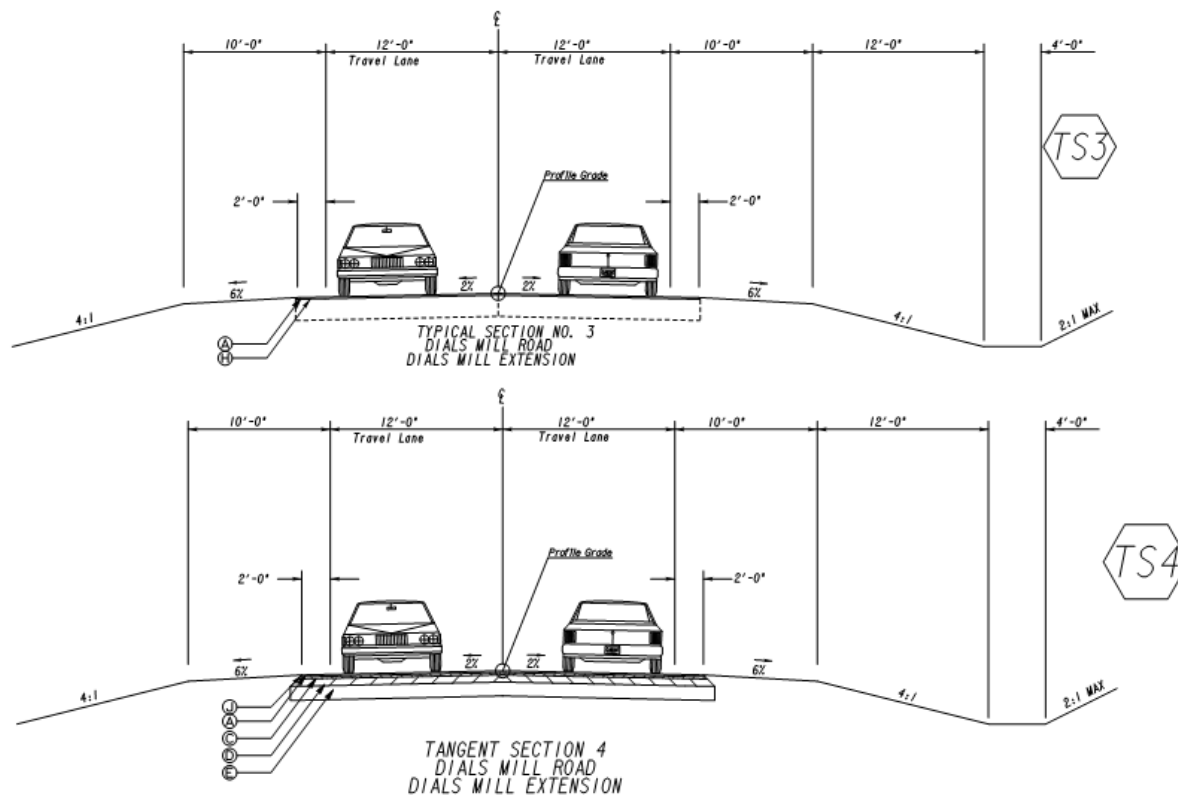
## Major Structures

- Proposed Bridge
  - 260 feet long
  - 40 feet wide
  - 2 twelve-foot lanes
  - 8 foot shoulders.

# Typical Sections – SR 316

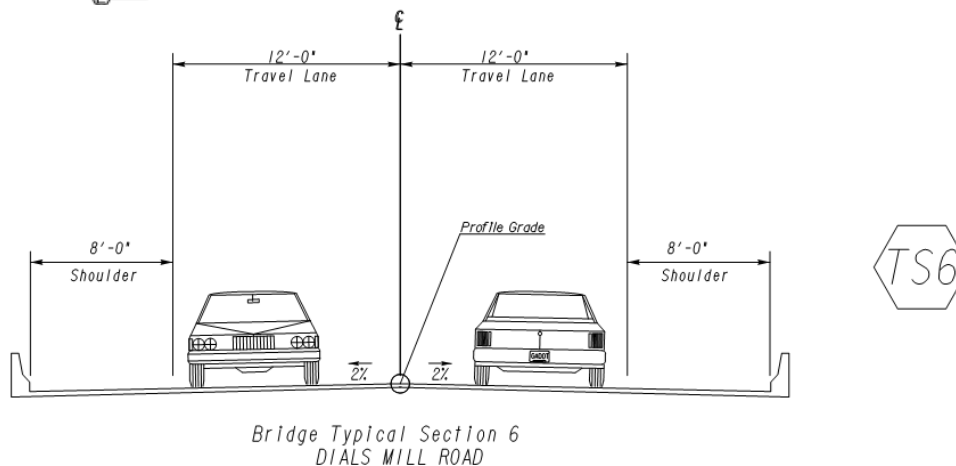
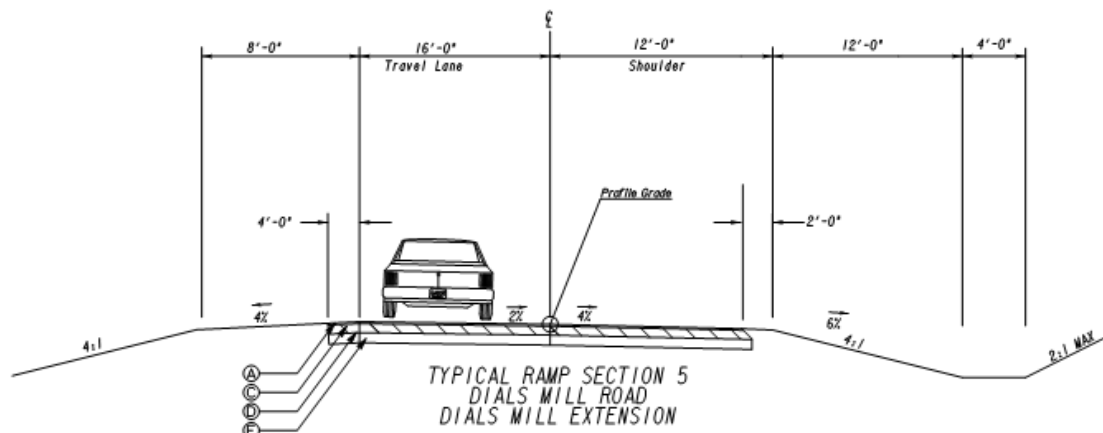


## Typical Sections – Dials Mill Rd. & Ext.





## Typical Sections – Ramp & Bridge



## Utility and Property

- 0007685: Aboveground utilities present, 2 billboards present
- 0013763: Underground and aboveground utilities present
- District Utilities has indicated that SUE would be performed.

## Right of Way

- Proposed ROW width of Dials Mill Ext.: 50-80 ft
- Proposed ROW width of Dials Mill Rd.: 80-100 ft
- Anticipated total number of impacted parcels: 28
- Total Displacements: 1

## Project Costs

Project Cost Estimate Summary and Funding Responsibilities:						
	PE Activities		ROW	Reimbursable Utilities	CST*	Total Cost
	PE Funding	Section 404 Mitigation				
Date of Estimate:	2/25/2020	Date	Date	1/26/2021	11/18/2020	
Funded By:	GDOT	GDOT	GDOT	GDOT	GDOT	
0007685 Programmed Cost:	\$1,233,550		\$284,000	\$0	\$15,036,150	\$16,553,700
0013763 Programmed Cost:	\$2,741,650		\$2,707,000	\$0	\$33,420,750	\$38,869,400
Estimated Cost:	0007685: \$1,233,550 0013763: \$2,741,650		TBD	\$745,000	\$5,853,890.38	TBD
Total Cost Difference:						TBD

## Alternatives Considered

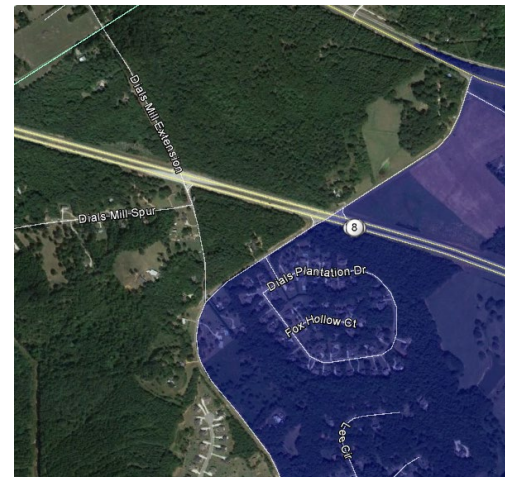
- Alternative 1—Grade Separated (Ramps at Dials Mill Ext. Bridge at Dials Mill Rd.)
  - Would eliminate crossing movement across SR 316
  - Would improve safety and reduce congestion along SR 316
  - Would maintain connection across SR 316 along local roads
  - Less likely to match driver expectations
- Alternative 2—Ramps and Bridge at Dials Mill Rd. (Dials Mill Ext. closed.)
  - Would increase displacements along Dials Mill Rd.
  - Would eliminate crossing movement across SR 316
  - Would improve safety and reduce congestion along SR 316
  - Matches driver expectations
- Alternative 3—Ramps and Bridge at Dials Mill Ext. (Dials Mill Rd. closed.)
  - Would increase displacements along Dials Mill Ext.
  - Would eliminate crossing movement across SR 316
  - Would improve safety and reduce congestion along SR 316
  - Matches driver expectations

## Environmental Considerations

- Public Involvement
  - A PIOH/PDOH is anticipated.
- Air / Noise
  - Project is not located in a Non-attainment area.

## Other Project Items

- Off-site Detours
  - Offsite detour expected during construction for both projects
- MS4
  - This project is partially located in a MS4 area
  - East of Dials Mill Rd. is within MS4 area
- Complete Streets
  - Project does not meet complete street warrants.



Blue area is MS4 area



## Additional Comments?

Please send additional comments to:

Jonathan Digioia, Project Manager

[jdigioia@dot.ga.gov](mailto:jdigioia@dot.ga.gov); 678-808-8842

Marvin Gavins II, PE; GDOT Roadway Design

[mgavins@dot.ga.gov](mailto:mgavins@dot.ga.gov), 404-631-1616

Garrett Stinson GDOT Roadway Design

[gstinson@dot.ga.gov](mailto:gstinson@dot.ga.gov), 404-631-1558



# Questions?

## Digioia, Jonathan

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**From:** Mull, Harold  
**Sent:** Tuesday, May 18, 2021 9:04 AM  
**To:** Digioia, Jonathan  
**Cc:** Decker, Sue Anne  
**Subject:** FW: Concept Team Mtg - Pls 0007685 & 0013763 (Oconee)

Good morning, Jonathan,

Here are my comments:

- The alternate that was proposed by the District was not listed as a consideration. This was for one bridge with connection roads for both Dials Mill Road and Dials Mill Road Extension. In this version, Dials Mill Extension is not cul-d-sac on the Winder/Statham side and has connectivity to SR 316. Currently anyone who lives on this side must make a loop to access SE 316.
- There is currently cable barrier on SR 316. Will need to address the installation of new cable barrier within the Project limits. Will need to make a site visit to see what is installed to see the limits in which this will have to be addressed. Currently not addressed in the Typical Sections shown.
- When the median/cross over and left turn lanes are removed, must address the installation of a new inside shoulder. Currently not addressed in the Typical Sections shown.
- When the right turn lanes are removed, must address the installation of a new outside shoulder. Currently not addressed in the Typical Sections shown.
- For staging, will need to add temporary pavement to the in the median to construct the ramps on the outside. Currently not addressed in the Typical Sections shown.

Any questions, please let me know.

### Harold Mull

*District 1 Construction Manager*



District 1 Construction  
1475 Jesse Jewell Pkwy  
Suite 100  
Gainesville, GA, 30501  
770.533.8963 office  
678.332.8307 cell

---

**From:** Digioia, Jonathan <JDigioia@dot.ga.gov>

**Sent:** Monday, May 17, 2021 5:15 PM

**To:** Stinson, Garrett K <GStinson@dot.ga.gov>; Gavins, Marvin <mgavins@dot.ga.gov>; Hancock, John <jhancock@dot.ga.gov>; Rudd, Christopher <crudd@dot.ga.gov>; Peters, Dave <dpeters@dot.ga.gov>; Patel, Hiral <hpatel@dot.ga.gov>; Shelby, Albert <ashelby@dot.ga.gov>; Hilliard, Bobby <bhilliard@dot.ga.gov>; Engineering Services - Concepts <engsvcsconcepts@dot.ga.gov>; Duff, Eric <eduff@dot.ga.gov>; Doyle, Andy (Jesse) <adoyle@dot.ga.gov>; Flournoy, Monica <mflournoy@dot.ga.gov>; York, Kevin <keyork@dot.ga.gov>; Casey, Andy <acasey@dot.ga.gov>; Heath, Andrew <aheath@dot.ga.gov>; Markham, Matt <MMarkham@dot.ga.gov>; OFM Concept Reports <OFMConceptReports@dot.ga.gov>; Digamon, Donn P <DoDigamon@dot.ga.gov>; Allen, Patrick

<paallen@dot.ga.gov>; Giles, Shannon <sgiles@dot.ga.gov>; Mull, Harold <hmull@dot.ga.gov>; Mullins, Kelvin <kemullins@dot.ga.gov>; Decker, Sue Anne <sdecker@dot.ga.gov>; Coley, Kim <kcoley@dot.ga.gov>; Rob Mabry <rmabry@dot.ga.gov>; Dykes, Jason <jdykes@dot.ga.gov>; Pride-Foster, Yulonda <ypride@dot.ga.gov>  
**Cc:** Geotechnical\_Reports <Geotechnical\_Reports@dot.ga.gov>; Pavement Management <PavementManagement@dot.ga.gov>; James, Cleopatra C <CJames@dot.ga.gov>; Hooker, Randi M <RHooker@dot.ga.gov>; Stovall-Dixon, Krystal E. <kstovall-dixon@dot.ga.gov>; Tucker, Troy <ttucker@dot.ga.gov>; Masutier, Valerie <VMasutier@dot.ga.gov>; Sherman, Brian A <BSherman@dot.ga.gov>; Franca, Raphael <RFranca@dot.ga.gov>; Carter, Sam <SCarter@dot.ga.gov>; Sexton-Paperno, Anne <ASexton-Paperno@dot.ga.gov>; Peevy, Jonathan <jpeevy@dot.ga.gov>; Niebauer, Parker J <PNiebauer@dot.ga.gov>; Cole, William R. <wicole@dot.ga.gov>; Holder, Theresa <tholder@dot.ga.gov>; Ford, Jalen T <JFord@dot.ga.gov>; Caiafa, Thomas <tcaiafa@dot.ga.gov>; Grayson, Kimberly S <KGrayson@dot.ga.gov>; Davis, Elizabeth H <EDavis@dot.ga.gov>; Cedor, Courtney <CCedor@dot.ga.gov>; Raymond, Christopher <craymond@dot.ga.gov>; Pearson, Andrew C <APearson@dot.ga.gov>; Holbrook, Terri <teholbrook@dot.ga.gov>; Palmer, Janis Lynn <jlpalmer@dot.ga.gov>; Oliver, Robby <ROliver@dot.ga.gov>; Hightower, Edward A <EHightower@dot.ga.gov>; James Childs <jchilds@waltonemc.com>; Tilden, Daniel <DTILDEN@southernco.com>; Galen Davis (gdavis@southernco.com) <gdavis@southernco.com>; P. E. Clay E. Johnson - AT&T (cj3079@att.com) <cj3079@att.com>; Bates, Christopher <Christopher\_Bates2@comcast.com>; Brooks, Oliver <Oliver\_Brooks@cable.comcast.com>; jody\_childers@comcast.com; Jody Woodall <jwoodall@oconee.ga.us>; Mauldin-Kinney, Ginny <vmauldin@southernco.com>; Baker, Seth Patric <SETBAKER@SOUTHERNCO.COM>; evan.moshonisiotis@fiberlight.com; IVEY, TRINA <ki2863@att.com>; tarthur@piedmontwater.com; tarcher@piedmontwater.com; ash.belavadi@verizon.com; mark.reeves@libertyutilities.com; david.lloyd@libertyutilities.com; Brown, Mike <mbrown@jacksonemc.com>; Steven DeGrave <sdegrave@sdt-1.com>  
**Subject:** RE: Concept Team Mtg - Pls 0007685 & 0013763 (Oconee)

Good afternoon,

This is a friendly reminder to **please provide any comments on the draft PI 0007685 & 0013763 concept report ASAP** prior to this Thursday's Concept Team Meeting, as requested in the message below and in the meeting request letter.

**The meeting presentation slides are now available** in both full-page and handout format in the ProjectWise folder below:

[pw:\\gdot-go-pwis01.gdot.ad.local:ProjectWise\Documents\Projects\0007685 - Oconee - Grade Separation - SR8-SR316-US29 @ CR58\PE \(Preconstruction\)\Program Delivery\Concept Report\CTM\](pw:\\gdot-go-pwis01.gdot.ad.local:ProjectWise\Documents\Projects\0007685 - Oconee - Grade Separation - SR8-SR316-US29 @ CR58\PE (Preconstruction)\Program Delivery\Concept Report\CTM\)

For those without ProjectWise access, the slideshow PDF in full-page format is attached to this message.

Thanks,

**Jonathan DiGioia, PE**  
*District 1 Project Manager*



Office of Program Delivery  
600 West Peachtree Street, 25<sup>th</sup> Floor  
Atlanta, GA 30308  
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[jdigioia@dot.ga.gov](mailto:jdigioia@dot.ga.gov)

-----Original Appointment-----

**From:** Digioia, Jonathan

**Sent:** Thursday, April 29, 2021 2:50 PM

**To:** Digioia, Jonathan; Stinson, Garrett K; Gavins, Marvin; Hancock, John; Rudd, Christopher; Peters, Dave; Patel, Hiral; Shelby, Albert; Hilliard, Bobby; Engineering Services - Concepts; Duff, Eric; Doyle, Andy (Jesse); Flournoy, Monica; York, Kevin; Casey, Andy; Heath, Andrew; Markham, Matt; OFM Concept Reports; Digamon, Donn P; Allen, Patrick; Giles, Shannon; Mull, Harold; Mullins, Kelvin; Decker, Sue Anne; Coley, Kim; Rob Mabry; Dykes, Jason; Pride-Foster, Yulonda

**Cc:** Geotechnical\_Reports; Pavement Management; James, Cleopatra C; Hooker, Randi M; Stovall-Dixon, Krystal E.; Tucker, Troy; Masutier, Valerie; Sherman, Brian A; Franca, Raphael; Carter, Sam; Sexton-Paperno, Anne; Peevy, Jonathan; Niebauer, Parker J; Cole, William R.; Holder, Theresa; Ford, Jalen T; Caiafa, Thomas; Grayson, Kimberly S; Davis, Elizabeth H; Cedor, Courtney; Raymond, Christopher; Pearson, Andrew C; Holbrook, Terri; Palmer, Janis Lynn; Oliver, Robby; Hightower, Edward A; James Childs; Tilden, Daniel; Galen Davis ([gdavis@southernco.com](mailto:gdavis@southernco.com)); P. E. Clay E. Johnson - AT&T ([cj3079@att.com](mailto:cj3079@att.com)); Bates, Christopher; Brooks, Oliver; [jody\\_childers@comcast.com](mailto:jody_childers@comcast.com); Jody Woodall; Mauldin-Kinney, Ginny; Baker, Seth Patric; [evan.moshonisiotis@fiberlight.com](mailto:evan.moshonisiotis@fiberlight.com); IVEY, TRINA; [tarthur@piedmontwater.com](mailto:tarthur@piedmontwater.com); [tarcher@piedmontwater.com](mailto:tarcher@piedmontwater.com); [ash.belavadi@verizon.com](mailto:ash.belavadi@verizon.com); [mark.reeves@libertyutilities.com](mailto:mark.reeves@libertyutilities.com); [david.lloyd@libertyutilities.com](mailto:david.lloyd@libertyutilities.com); Brown, Mike; Steven DeGrave

**Subject:** Concept Team Mtg - Pls 0007685 & 0013763 (Oconee)

**When:** Thursday, May 20, 2021 1:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).

**Where:** Microsoft Teams Meeting

Good afternoon,

Please see attached for a Concept Team Meeting request for Pls 0007685 & 0013763 (SR 316 @ Dials Mill Ext; SR 316 @ Dials Mill Rd – Oconee). The meeting will be held on MS Teams (see link at the bottom of this message) on **Thursday, May 20, 2021 from 1:00 PM to 4:00 PM.**

The draft concept report is available for review at the following ProjectWise location: [pw:\gdot-go-pwis01.gdot.ad.local:ProjectWise\Documents\Projects\0007685 - Oconee - Grade Separation - SR8-SR316-US29 @ CR58\PE \(Preconstruction\)\Program Delivery\Concept Report\CTM\](pw:\gdot-go-pwis01.gdot.ad.local:ProjectWise\Documents\Projects\0007685 - Oconee - Grade Separation - SR8-SR316-US29 @ CR58\PE (Preconstruction)\Program Delivery\Concept Report\CTM\)

To help make this a beneficial concept team meeting, **it is crucial that participants provide detailed comments at least three days ahead of the meeting** as requested in the attached letter.

Please let me know if you have any questions.

Thank you,

**Jonathan DiGioia, PE**

*District 1 Project Manager*



Office of Program Delivery  
600 West Peachtree Street, 25<sup>th</sup> Floor  
Atlanta, GA 30308  
Office/Mobile: (678) 808-8842  
[jdigioia@dot.ga.gov](mailto:jdigioia@dot.ga.gov)

---

# Microsoft Teams meeting

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Georgia is a state of natural beauty. And it's a state that spends millions each year cleaning up litter that not only mars that beauty, but also affects road safety, the environment and the economy. Do your part to **KEEP IT CLEAN GEORGIA** – don't litter. How can you play an active role in protecting the splendor of the Peach State? Find out at <http://keepgaclean.com/>.



# MEETING NOTES



**GDOT PM**     Jonathan DiGioia  
**PI No.**       0007685 & 0013763

**Subject: ICTM Design Alternatives Follow-Up Discussion**

**Date: 9/18/2020**

**Coordination Type:**     ☐Email                      ☒Telephone/MS Teams                      ☐Physical Meeting

**Attendees:**

	Name	Office
<input checked="" type="checkbox"/>	Jonathan DiGioia	GDOT OPD (PM)
<input checked="" type="checkbox"/>	Bryan Lott	GDOT OPD
<input checked="" type="checkbox"/>	Cleopatra James	GDOT OPD
<input checked="" type="checkbox"/>	Krystal Stovall-Dixon	GDOT OPD
<input checked="" type="checkbox"/>	Barbara Hopkins	GDOT OPD
<input checked="" type="checkbox"/>	Randi Hooker	GDOT OPD
<input checked="" type="checkbox"/>	Theresa holder	GDOT Roadway Design
<input type="checkbox"/>	Marvin Gavins	GDOT Roadway Design
<input checked="" type="checkbox"/>	Garrett Stinson	GDOT Roadway Design
<input checked="" type="checkbox"/>	Harold Mull	GDOT District 1 Construction
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**Discussion:**

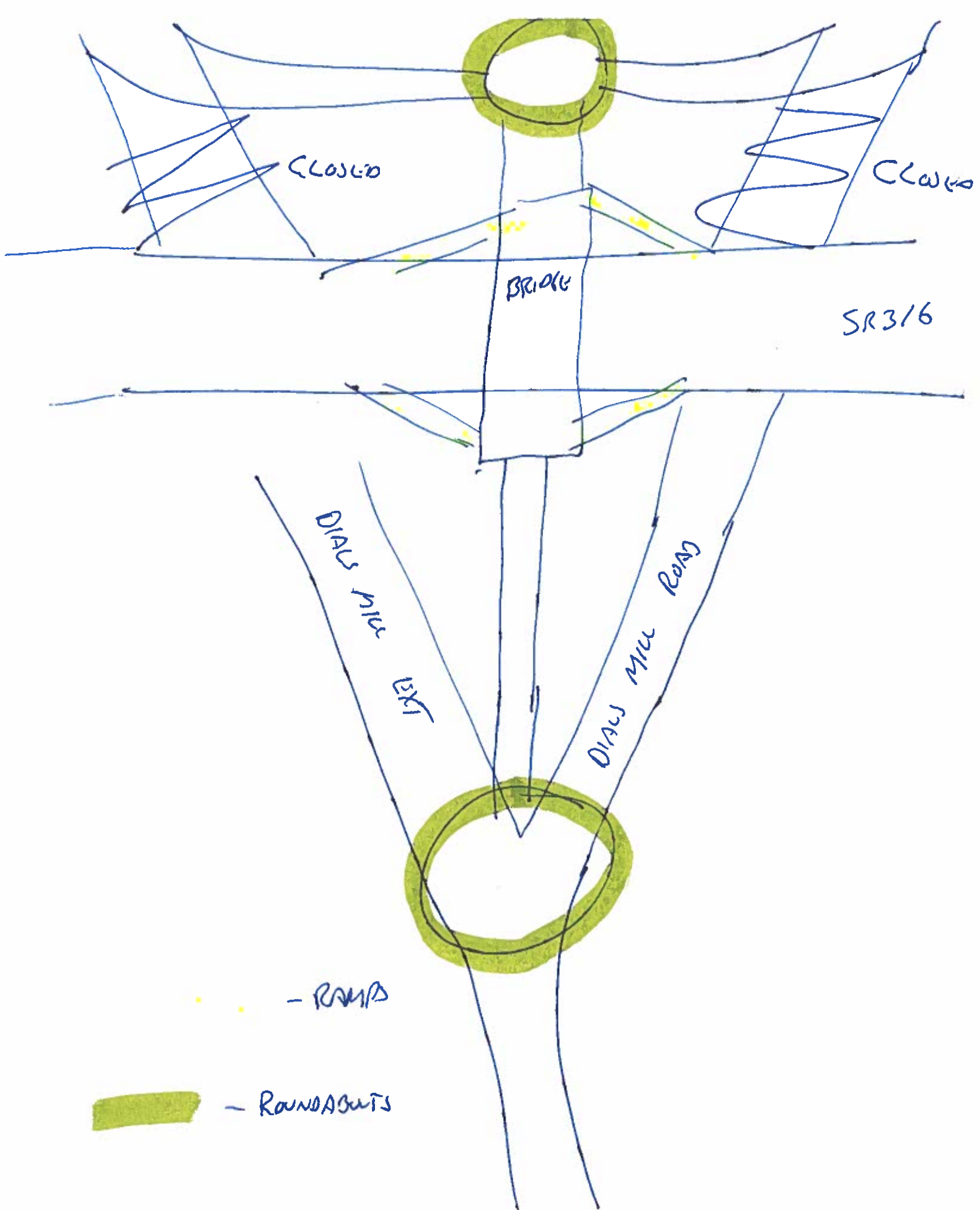
- Reviewed alternatives described in Initial Concept Meeting presentation on 8/24/2020
- Reviewed alternatives provided by GDOT D1 and Oconee County, which all involved a single, full-access interchange on new location between the two existing intersections. Sub-variations on this alternative included:
  - Roundabout ramp terminals, potentially tying in realigned Dials Mill Road and Dials Mill Extension as well
  - Adding a new alignment roadway all the way from the new interchange to Atlanta Road to the north

## MEETING NOTES

- See attached sketches for more info
- Garrett said he is comparing the alternatives presented in the ICTM as well as the interchange alternative with the new location roadway up to Atlanta Road and another interchange alternative that T's into Dials Mill Road on the north side
- Road design and OPD will keep in touch on design alternative updates, questions, new information, etc.

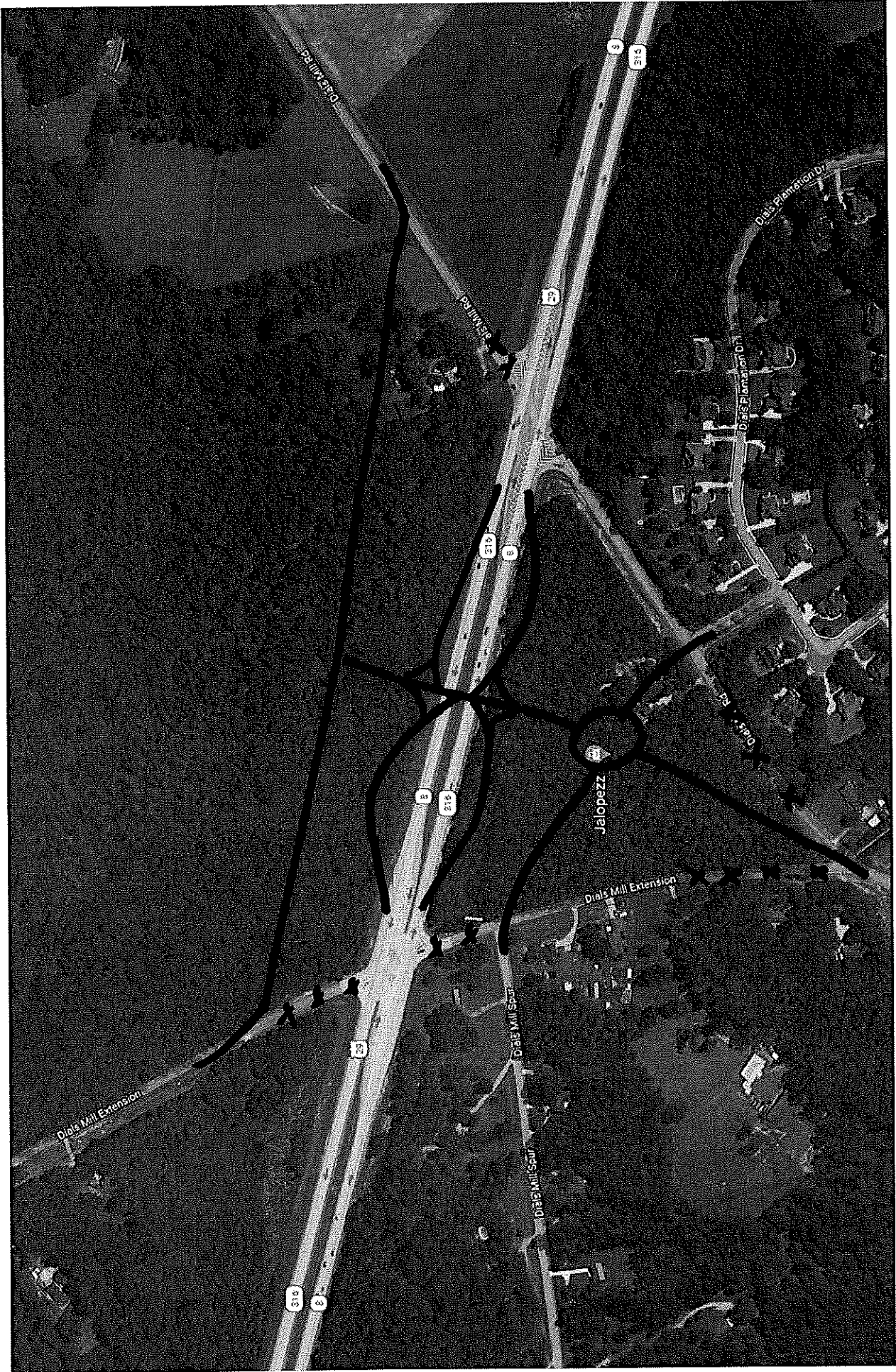
### **Action Items:**

- Roadway design continue developing alternatives, including multiple variations of new-alignment interchange alternatives
- Roadway develop high-level layout for aerial mapping by 9/25 or sooner
- Roadway develop Environmental Survey Boundary ESB for preferred alternative by 10/19/2020 per baseline schedule
- PM check with Daniel Funk on status of traffic request



[illegible]









DIALS MILL EXTENSION

MILE MARKER 18.8

0007685

DIALS MILL SPUR

DIALS MILL RD.

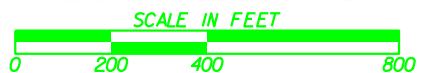
0013763

DIALS PLANTATION BLVD.

DIALS MILL RD.

SR 316

MILE MARKER 19.4



PROJECT LAYOUT  
0013763 & 0007685